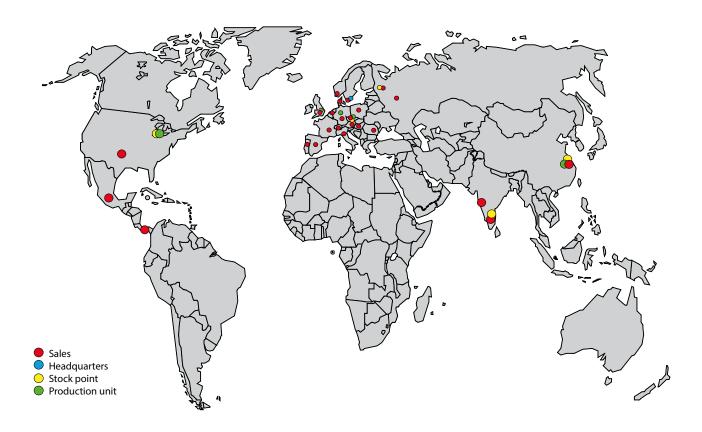


## **GCE IN GLOBAL LEAD**



## GCE BUSINESS IN GENERAL

GCE's main business originally concentrated on the oxy-acetylene cutting and welding market, but with almost 100 years of experience in the handling of high pressure gases, the product range has grown rapidly. Today's product portfolio fits a large variety of applications, from simple pressure regulators and blowpipes for welding and cutting to highly sophisticated gas supply systems for the medical and electronics industry and analytical laboratory equipment.

### **GCE GROUP INCLUDES FOUR BUSINESS AREAS:**

- Cutting & Welding Technology
- Valves
- Healthcare
- Druva

#### **ORIGINS**

The origins of GCE (Gas Control Equipment) go back as far as the beginning of the twentieth century when oxy-acetylene cutting and welding methods were first invented. GCE group as an independent entity was formed in 1987 through the merging of gas equipment activities by two of the world's leading industrial gas and welding equipment companies into one independent entity. The GCE Group has grown rapidly since its establishment and is leading the restructuring of the European gas-equipment industry through mergers and acquisitions. Through the years, GCE Group's R&D work has resulted in innovative solutions that have quickly become field standards.

#### **GCE SERVICES**

GCE's main customers in industrial area are wholesalers and local distributors, though in some markets gas companies also distribute equipment and cooperate with GCE Group.

For these companies we provide local commercial support, professional support and marketing activities. Key end-customers such as shipyards, repair shops and OEM customers, such as welding machine manufacturers, account for a significant part of the sales volume.

#### A COMPLETE RANGE FOR CUTTING & WELDING

GCE Group is one of the world's leading producers of industrial regulators for cutting and welding. The range covers a broad spectrum of products, for different applications, that have been designed according to the requirements of most European standards such as DIN, Afnor, BSI and Nordic.

The torch range includes products for heating, cutting, brazing and flame-cleaning applications designed in accordance with the preferences of individual markets and customers. Regulators, torches, nozzles and other products are also increasingly combined in sets and sold to users as a single package.

GCE Group is a pioneer in the field of safety equipment and currently produces a comprehensive range of flashback arrestors and hose check valves. A range of nozzles, including the longlife COOLEX® nozzle, completes GCE's Cutting & Welding range.

GCE Group's ranges include various types of gas equipment enabling safe handling of gases in central gas supply systems and brewery equipment, to machine cutting products. We offer cylinder valves and combination valves, pressure control units, gas manifolds, outlet points, shut-off valves, alarm and safety units, high-pressure flexible hoses and accessories for different applications, gases, pressures and flow rates. All products have to meet demanding requirements for rugged durability, leak-proof sealing and overall safety. Uniquely qualified in this area, GCE stands at the forefront of international development of these products.

#### GLOBAL LEADER IN OXY-FUEL TECHNOLOGY

With extensive experience in the development and production of machine cutting torches and cutting nozzles, GCE Group is a global leader in oxy-fuel cutting technology. The design of the products is based on GCE's extensive knowledge and expertise in the oxy-fuel area.



# **CONTENTS**

ARC WELDING EQUIPMENT	
Welders ARCONTROL	4
Cutters Gladius	5
MIG Torches MIGSTAR PRO and Spare Parts	6
TIG Torches TIGSTAR PRO and Spare Parts	13
Tungsten Electrodes	16
Plasma Torches SOLARIS	20
Air Carbon-ARC Torches	25
Electrode Holders	26
Earth Clamps	29
Cables and Connectors	32
WELDING CONSUMABLES	
Stick Electrodes (SMAW-MMA)	34
STAINLESS STEEL Based Alloys (GTAW-TIG)	39
ALUMINUM Based Alloys (GTAW-TIG)	40
IRON Based Alloys (OFW - Brazing)	41
COPPER Based Alloys (OFW - Brazing)	42
COPPER-PHOSPHORUS Based Alloys (OFW - Brazing)	44
SILVER Based Alloys (OFW - Brazing)	47
TIN Based Alloys (Soldering)	51
ACCESSORIES	
Rubber Hoses in Bulk	56
Rubber Hoses with Fittings	
Rubber Hoses Tools	
Apics Lighter	
Tools (Lighters, Mirrors, Tip Cleaners, Brushes, Hammers)	
Sprays	
Markers	
Brasotek	74
Thermal protection	75
Protective screens (Curtains)	77
WORK PROTECTION	
LCD Masks and Goggles	
Helmets and Hand Shields	
Spare Lenses	
Goggles	
Workwear	
Gloves	98







# **DC INVERTER MMA / LIFT TIG WELDERS**



ARControl welders are general MMA arc welder adopting the latest pulse width modulation (PWM) technology and the insulated gate bipolar transistor (IGTB) power module.

Extremely low weight, very small size, portable.

Supplied in a hard case and equipped with electrode holder, earth clamp, cables and connectors.

#### **EXCELLENT PERFORMANCES**

- The constant current output makes the welding arc more stable.
- Fast and dynamic response speed reduces the impact from the arc length fluctuation to the current.
- Accurate stepless current adjustment and pre-setting function.



### **GENERATOR FRIENDLY**

Designed to work with diesel generators and to avoid failures due to voltage spikes.



Equipped with temperature, voltage and current sensors for high protection from under voltage, over current, overheating.

#### EXTRA FUNCTIONS.

Hot Start, Anti-sticking, Arc Force



#### **DIGITAL DISPLAY**

Variable amperage control with digital meter, for a welding current instant display.



#### **GENERAL APPLICATIONS**

Suitable for MMA arc welding and TIG lift welding.

440V TESTED IN PRODUCTION





Art. Nr.	Description	Qt.	Stock class.
ARC010	ARControl 135 Digital	1	DFW
ARC020	ARControl 160 Digital	1	DFW
ARC030	ARControl 200 Digital	1	DFW



C E compliant
Directive 2004/108/EC
Directive 2006/95/EC
EN 60974-1
EN 60974-10

	<b>ARControl 135</b>	ARControl 160	ARControl 200
Power Supply Voltage:	230V	230V	230V
Duty Cycle (40°C 10min):	25% at 135A	30% at 160A	30% at 200A
Protection Class:	IP23	IP23	IP23
Insulation Class:	Н	Н	Н
Cooling:	AF	AF	AF
Electrode Diameter:	ø2.5 ø3.2	ø2.5 ø3.2 ø4.0	ø2.5 ø3.2 ø4.0
Net Weight (Kg):	3.55	4.5	4.6
Connections:	25 mm <sup>2</sup> (small)	25 mm <sup>2</sup> (small)	35 mm <sup>2</sup> (big)



# DC INVERTER PLASMA CUTTING MACHINE



# 6ladius

GLADIUS machines are a new generation of a portable equipment for manual plasma cutting. They are equipped with inverter technology and pilot arc controller that ensure an optimal current adjustment, excellent performance and cutting quality with increased capability and speed.

GLADIUS machines are combined with a high-quality cutting torch (without HF) specifically tested to obtain the maximum performance. Two versions to meet your needs: with or without air compressor.

#### PILOT ARC CONTROLLER

Increases cutting capabilities and speed. Extends tip's life. Ideal for grid cutting.

#### **AUTOMATIC PROTECTIONS**

Equipped with sensors to protect and alarm for overheating and over-current.

#### LIGHTWEIGHT

Extremely low weight and versatility.

#### **AIR FILTERING**

Air filtering with automatic water drainage (model without compressor).

#### **EQUIPPED WITH**

- Earth Clamp (with cable)
- Hand Cutting Torch SOLARIS M60 (4 m) with Central connection EURO type







Central connection EURO type

Art. Nr.	Descr.	Qt.	Stock class.
PLPM040	PLASMA CUTTER GLADIUS 40	1	DFW
PLPM040COM	PLASMA CUTTER GLADIUS 40 COMPR	1	DFW

## TECHNICAL DATA

	Gladius 40	Gladius 40 COMPR
Power Supply Voltage (V):	230 V ± 10% single-phase	230 V ± 10% single-phase
Frequency (Hz):	50/60 Hz	50/60 Hz
Rated Input Power (KW):	4.8 KW	4.9 KW
Rated Input Current (A):	33 A	32 A
Duty Cycle (40°C 10Min):	60% 40A	60% 40A
Max. No Load Voltage (V):	220 V	220 V
Cutting Current Range (A):	20~40 A	20~40 A
Severance Cut (mm):	≤25 mm (Carbon Steel)	≤14 mm (Carbon Steel)
Production Cut (mm):	≤20 mm (Carbon Steel)	≤12 mm (Carbon Steel)
	≤20 mm (Stainless Steel)	≤12 mm (Stainless Steel)
	≤16 mm (Aluminum)	≤12 mm (Aluminum)
	≤12 mm (Copper)	≤5 mm (Copper)
Net Weight (Kg):	5.7 Kg	18 Kg
Insulation Class:	Н	Н
Protection Class:	IP23	IP23
Cooling:	AF	AF
Use with Power Generator:	YES	NO



Directive 2004/108/EC Directive 2006/95/EC EN 60974-1 EN 60974-10 EN 60974-7



# **VERY HIGH RELIABILITY, VERY GOOD PRICE!**

# MIGSTAR PRO

The new powerful generation of GCE MIG torches feature extraordinary technical characteristics, advanced technology and an ergonomic anti-slide shank. They're specifically designed to enable the users to a comfortable and practice operations. Available in two variants: Air cooled and water cooled. Excellent value for money.

#### **FEATURES**

- Optimum cooling (Air or Water)
- Ergonomic handle with anti-slide rubber inserts.
- Ball joint at the handle improving the handling
- Push button feature to protect against accidental starting
- Strong and ergonomic connection EURO type
- Ball joint at the connection extending the cables lifetime and governing the welding wire feeder.
- Textile covers for water hoses offering maximum protection.
- Non detachable plastic caps for water hoses.
- Contact tip, gas nozzle and liner included.



Anti-slip rubber insert on the handle



Ball joint at the handle improving the handling



Push button feature to protect against accidental starting



Strong and ergonomic connection EURO type

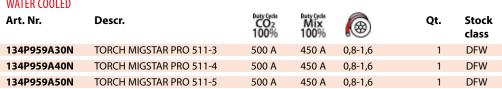


Rotating connection to govern welding wire feeder



AIN COOLED				_			
Art. Nr.	Descr.	CO <sub>2</sub> 60%	Mix 60%		mm <sup>2</sup>	Qt.	Stock class
102P959A30N	TORCH MIGSTAR PRO 150-3	180 A	150 A	0,6-1,0	16 mm <sup>2</sup>	1	DFW
102P959A40N	TORCH MIGSTAR PRO 150-4	180 A	150 A	0,6-1,0	16 mm <sup>2</sup>	1	DFW
102P959A50N	TORCH MIGSTAR PRO 150-5	180 A	150 A	0,6-1,0	16 mm <sup>2</sup>	1	DFW
112P959A30N	TORCH MIGSTAR PRO 240-3	250 A	220 A	0,6-1,2	25 mm <sup>2</sup>	1	DFW
112P959A40N	TORCH MIGSTAR PRO 240-4	250 A	220 A	0,6-1,2	25 mm <sup>2</sup>	1	DFW
112P959A50N	TORCH MIGSTAR PRO 240-5	250 A	220 A	0,6-1,2	25 mm <sup>2</sup>	1	DFW
103P959A30N	TORCH MIGSTAR PRO 252-3	230 A	200 A	0,6-1,2	25 mm <sup>2</sup>	1	DFW
103P959A40N	TORCH MIGSTAR PRO 252-4	230 A	200 A	0,6-1,2	25 mm <sup>2</sup>	1	DFW
103P959A50N	TORCH MIGSTAR PRO 252-5	230 A	200 A	0,6-1,2	25 mm <sup>2</sup>	1	DFW
114P959A30N	TORCH MIGSTAR PRO 360-3	340 A	300 A	0,8-1,6	42 mm <sup>2</sup>	1	DFW
114P959A40N	TORCH MIGSTAR PRO 360-4	340 A	300 A	0,8-1,6	42 mm <sup>2</sup>	1	DFW
114P959A50N	TORCH MIGSTAR PRO 360-5	340 A	300 A	0,8-1,6	42 mm <sup>2</sup>	1	DFW

## WATER COOLED



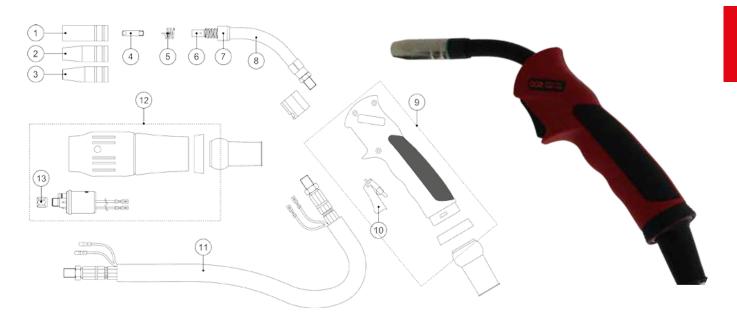




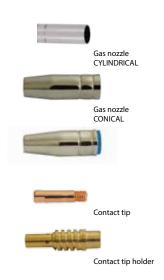




# **TORCH MIGSTAR PRO 150 (AIR COOLED)**



# MIGSTAR 150 - SPARE PARTS



701P002005

Liner nut M12×1

Liners for all kind of torches - see next pages

Art. Nr.	Descr.		Dimensions	Pos.	Qt.	Stock class
345P011002	Gas nozzles	145.0041	D.16 mm CYLINDRICAL	1	10	DFW
345P012002	Gas nozzles	145.0075	D.12 mm CONICAL	2	10	DFW
345P013002	Gas nozzles	145.0123	D.9,5 mm CONICAL	3	10	DFW
340P061073	Contact tip E-Cu	140.0008	M6×25 - D.0,6 mm	4	25	DFW
340P081073	Contact tip E-Cu	140.0059	M6×25 - D.0,8 mm	4	25	DFW
340P101073	Contact tip E-Cu	140.0253	M6×25 - D.1,0 mm	4	25	DFW
340P121073	Contact tip E-Cu	140.0387	M6×25 - D.1,2 mm	4	25	DFW
102P002011	Nozzle spring	002.0058		5	10	DFW
102P002037	Contact tip holder/Diffusor	002.0078	M6	6	10	DFW
102P002003	Insulator	002.0050		7	10	DFW
102P001010	Swan neck	002.0009		8	1	DFW
Art. Nr.	Descr.			Pos.	Qt.	Stock class
WP90010	Plastic handle complete for	MIGSTAR PR	O AIR COOLED	9	1	MTO
WP90009	Trigger black for MIGSTAR PI	RO		10	5	DFW
360P161130	Complete cable 16 mm <sup>2</sup>	3 m		11	1	MTO
360P161140	Complete cable 16 mm <sup>2</sup>	4 m		11	1	MTO
360P161150	Complete cable 16 mm <sup>2</sup>	5 m		11	1	MTO
WP90014	Connection EURO set compl	ete for torch	air cooled	12	1	MTO

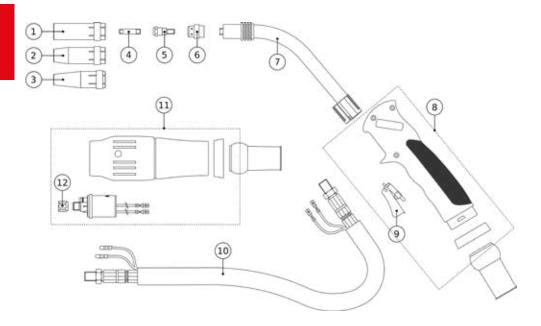
The products listed here are fully compatible with other brands of equipment. References to other companies' products, numbers and registered trademarks are for market's convenience only.

DFW

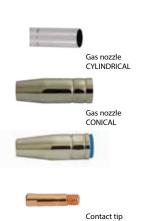
13



# **TORCH MIGSTAR PRO 240 (AIR COOLED)**



# MIGSTAR 240 - SPARE PARTS

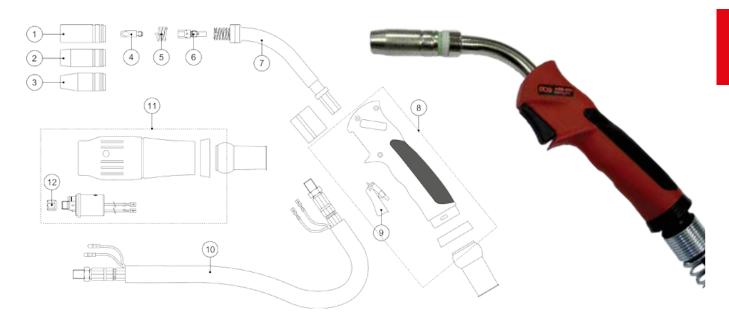


Art. Nr.	Descr.		Dimensions	Pos.	Qt.	Stock class
345P011012	Gas nozzle	145.0047	D.17 mm CYLINDRICAL	1	10	DFW
345P012012	Gas nozzle	145.0080	D.12,5 mm CONICAL	2	10	DFW
345P013012	Gas nozzle	145.0128	D.10 mm CONICAL	3	10	MTO
340P061073	Contact tip E-Cu	140.0008	M6×25 – D.0.6 mm	4	25	DFW
340P081073	Contact tip E-Cu	140.0059	M6×25 – D.0.8 mm	4	25	DFW
340P101073	Contact tip E-Cu	140.0253	M6×25 – D.1.0 mm	4	25	DFW
340P121073	Contact tip E-Cu	140.0387	M6×25 – D.1.2 mm	4	25	DFW
342P006012	Contact tip holder	142.0003	M6×26 mm	5	10	DFW
112P002023	White diffuser Plastic	012.0183	20 mm	6	10	DFW
112P001013	Swan neck	012.0001		7	1	DFW

Art. Nr.	Descr.	Pos.	Qt.	Stock class
WP90010	Plastic handle complete for MIGSTAR PRO AIR COOLED	8	1	MTO
WP90009	Trigger black for MIGSTAR PRO	9	5	DFW
360P251130	Complete cable 25 mm <sup>2</sup> 3 m	10	1	MTO
360P251140	Complete cable 25 mm <sup>2</sup> 4 m	10	1	MTO
360P251150	Complete cable 25 mm <sup>2</sup> 5 m	10	1	MTO
WP90014	Connection EURO set complete for torch air cooled	11	1	MTO
701P002005	Liner nut M12×1	12	10	DFW
	Liners for all kind of torches - see next pages			



# **TORCH MIGSTAR PRO 252 (AIR COOLED)**



# MIGSTAR 252 – SPARE PARTS

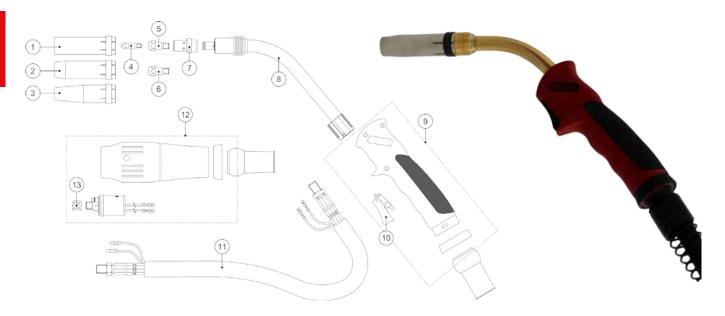


Art. Nr.	Descr.		Dimensions	Pos.	Qt.	Stock class
345P011003	Gas nozzles	145.0042	D.18 mm CYLINDRICAL	1	10	DFW
345P012003	Gas nozzles	145.0076	D.15 mm CONICAL	2	10	DFW
345P013003	Gas nozzles	145.0124	D.11,5 mm CONICAL	3	10	DFW
340P061069	Contact tip E-Cu	140.0005	M6×28 - D.0,6 mm	4	25	DFW
340P081069	Contact tip E-Cu	140.0051	M6×28 - D.0,8 mm	4	25	DFW
340P101069	Contact tip E-Cu	140.0242	M6×28 - D.1,0 mm	4	25	DFW
340P121069	Contact tip E-Cu	140.0379	M6×28 - D.1,2 mm	4	25	DFW
340P141069	Contact tip E-Cu		M6×28 - D.1,4 mm	4	25	DFW
340P083069	Contact tip CuCrZr	140.0054	M6×28 - D.0,8 mm	4	25	DFW
340P103069	Contact tip CuCrZr	140.0245	M6×28 - D.1,0 mm	4	25	DFW
340P123069	Contact tip CuCrZr	140.0382	M6×28 - D.1,2 mm	4	25	DFW
103P002006	Nozzle spring	003.0013		5	10	DFW
342P006003	Contact tip holder/Diffusor	142.0001	M6×35 mm	6	10	DFW
104P001008	Swan neck	004.0012		7	1	DFW

Art. Nr.	Descr.	Pos.	Qt.	Stock class
WP90010	Plastic handle complete for MIGSTAR PRO AIR COOLED	8	1	MTO
WP90009	Trigger black for MIGSTAR PRO	9	5	DFW
360P251130	Complete cable 25 mm <sup>2</sup> 3 m	10	1	MTO
360P251140	Complete cable 25 mm <sup>2</sup> 4 m	10	1	MTO
360P251150	Complete cable 25 mm <sup>2</sup> 5 m	10	1	MTO
WP90014	Connection EURO set complete for torch air cooled	11	1	MTO
701P002005	Liner nut M12×1	12	10	DFW
	Liners for all kind of torches - see next pages			



# **TORCH MIGSTAR PRO 360 (AIR COOLED)**



# MIGSTAR 360 - SPARE PARTS



White diffuser

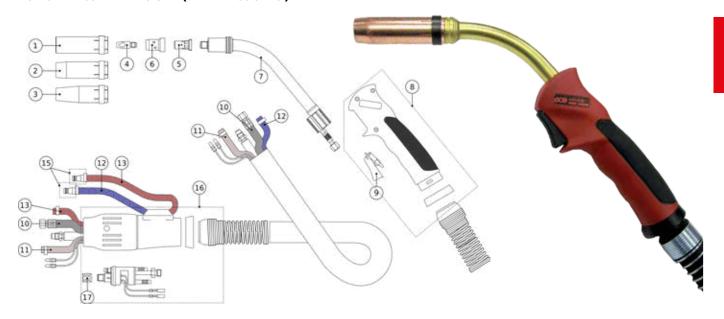
Art. Nr.	Descr.		Dimensions	Pos.	Qt.	Stock class
345P011010	Gas nozzles	145.0045	D.19 mm CYLINDRICAL	1	10	DFW
345P012010	Gas nozzles	145.0078	D.16 mm CONICAL	2	10	DFW
345P013010	Gas nozzles	145.0126	D.12 mm CONICAL	3	10	DFW
340P061069	Contact tip E-Cu	140.0005	M6×28 - D.0,6 mm	4	25	DFW
340P081069	Contact tip E-Cu	140.0051	M6×28 - D.0,8 mm	4	25	DFW
340P101069	Contact tip E-Cu	140.0242	M6×28 - D.1,0 mm	4	25	DFW
340P121069	Contact tip E-Cu	140.0379	M6×28 - D.1,2 mm	4	25	DFW
340P141069	Contact tip E-Cu		M6×28 - D.1,4 mm	4	25	DFW
340P083069	Contact tip CuCrZr	140.0054	M6×28 - D.0,8 mm	4	25	DFW
340P103069	Contact tip CuCrZr	140.0245	M6×28 - D.1,0 mm	4	25	DFW
340P123069	Contact tip CuCrZr	140.0382	M6×28 - D.1,2 mm	4	25	DFW
342P006014	Contact tip holder standard	142.0005	M6×28 mm	5	10	DFW
342P008014*	Contact tip holder special	142.0020	M8×28 mm	6	10	DFW
114P102004	White diffuser Plastic	014.0261	32,5 mm	7	10	DFW
114P002005	White diffuser Ceramic	014.0023	32,5 mm	7	10	DFW
114P001001	Swan neck	014.0006		8	1	DFW

 $<sup>^{\</sup>ast}$  this contact tip holder must be used with contact tip M8 (see spare parts of torch 511)

Art. Nr.	Descr.	Pos.	Qt.	Stock class
WP90010	Plastic handle complete for MIGSTAR PRO AIR COOLED	9	1	MTO
WP90009	Trigger black for MIGSTAR PRO	10	5	DFW
360P501130	Complete cable 42 mm <sup>2</sup> 3 m	11	1	MTO
360P501140	Complete cable 42 mm <sup>2</sup> 4 m	11	1	MTO
360P501150	Complete cable 42 mm <sup>2</sup> 5 m	11	1	MTO
WP90014	Connection EURO set complete for torch air cooled	12	1	MTO
701P002005	Liner nut M12×1	13	10	DFW
	Liners for all kind of torches - see next pages			



# **TORCH MIGSTAR PRO 511 (WATER COOLED)**



# MIGSTAR 511 H20 - SPARE PARTS



Gas nozzle CONICAL



Contact tip



Contact tip holder



Gas white diffuser

Art. Nr.	Descr.		Dimensions	Pos.	Qt.	Stock class
345P011030	Gas nozzles	145.0051	D.20 mm CYLINDRICAL	1	10	DFW
345P012030	Gas nozzles	145.0085	D.16 mm CONICAL	2	10	DFW
345P013030	Gas nozzles	145.0132	D.14 mm CONICAL	3	10	DFW
340P081262	Contact tip E-Cu	140.0114	M8×30 - D.0,8 mm	4	25	DFW
340P101262	Contact tip E-Cu	140.0313	M8×30 - D.1,0 mm	4	25	DFW
340P121262	Contact tip E-Cu	140.0442	M8×30 - D.1,2 mm	4	25	DFW
340P141262	Contact tip E-Cu		M8×30 - D.1,4 mm	4	25	DFW
340P161262	Contact tip E-Cu	140.0587	M8×30 - D.1,6 mm	4	25	DFW
340P083262	Contact tip CuCrZr(Long life)	140.0117	M8×30 - D.0,8 mm	4	25	DFW
340P103262	Contact tip CuCrZr(Long life)	140.0316	M8×30 - D.1,0 mm	4	25	DFW
340P123262	Contact tip CuCrZr(Long life)	140.0445	M8×30 - D.1,2 mm	4	25	DFW
340P143262	Contact tip CuCrZr(Long life)		M8×30 - D.1,4 mm	4	25	DFW
340P163262	Contact tip CuCrZr(Long life)	140.0590	M8×30 - D.1,6 mm	4	25	DFW
342P008033	Contact tip holder	142.0022	M8x25 mm	5	10	DFW
130P102001	Gas diffuser white plastic	030.0145	28 mm	6	10	DFW
130P102031	Gas diffuser white ceramic	030.0190	28 mm	6	10	DFW
134P001001	Swan neck	032.0002		7	1	DFW

Art. Nr.	Descr.		Pos.	Qt.	Stock class
WP90012	Plastic handle complete for MIGSTAI	R PRO WATER COOLED	8	1	MTO
WP90009	Trigger black for MIGSTAR PRO		9	5	DFW
319P162130GCE	Cable complete (power+water)	3 m	10	1	MTO
319P162140GCE	Cable complete (power+water)	4 m	10	1	DFW
319P162150GCE	Cable complete (power+water)	5 m	10	1	DFW
302P010000	Gas hose		11	100	DFW
303P050000	Water hose Blue		12	100	MTO
303P060000	Water hose Red		13	100	MTO
701P002064	Quick connection H₂O		15	10	MTO
WP90016	Connection EURO set complete for torch water cooled			1	MTO
701P002005	Liner nut M12×1			10	DFW
	Liners for all kind of torches - see ne	xt pages			



# **TORCH MIGSTAR PRO**

# **LINERS FOR ALL KIND OF TORCHES**



# LINERS IN TEFLON FOR ALUMINUM WIRES

Art. Nr.	Long	0	Color	Qt.	Stock class
326P154035	3 m	0,6-0,9 mm	Blue	1	DFW
326P154045	4 m	0,6-0,9 mm	Blue	1	DFW
326P154055	5 m	0,6-0,9 mm	Blue	1	DFW
326P204035	3 m	1,0-1,2 mm	Red	1	DFW
326P204045	4 m	1,0-1,2 mm	Red	1	DFW
326P204055	5 m	1,0-1,2 mm	Red	1	DFW
326P274735	3 m	1,2-1,6 mm	Yellow	1	DFW
326P274745	4 m	1,2-1,6 mm	Yellow	1	DFW
326P274755	5 m	1,2-1,6 mm	Yellow	1	DFW



# LINERS FOR STEEL WIRES

Long	0	Color	Qt.	Stock class
3 m	0,6-0,9 mm	Blue	1	DFW
4 m	0,6-0,9 mm	Blue	1	DFW
5 m	0,6-0,9 mm	Blue	1	DFW
3 m	1,0-1,2 mm	Red	1	DFW
4 m	1,0-1,2 mm	Red	1	DFW
5 m	1,0-1,2 mm	Red	1	DFW
3 m	1,2-1,6 mm	Yellow	1	DFW
4 m	1,2-1,6 mm	Yellow	1	DFW
5 m	1,2-1,6 mm	Yellow	1	DFW
	3 m 4 m 5 m 3 m 4 m 5 m 3 m 4 m	3 m 0,6-0,9 mm 4 m 0,6-0,9 mm 5 m 0,6-0,9 mm 3 m 1,0-1,2 mm 4 m 1,0-1,2 mm 5 m 1,0-1,2 mm 3 m 1,2-1,6 mm 4 m 1,2-1,6 mm	3 m 0,6-0,9 mm Blue 4 m 0,6-0,9 mm Blue 5 m 0,6-0,9 mm Blue 3 m 1,0-1,2 mm Red 4 m 1,0-1,2 mm Red 5 m 1,0-1,2 mm Red 5 m 1,0-1,6 mm Yellow 4 m 1,2-1,6 mm Yellow	3 m 0,6-0,9 mm Blue 1 4 m 0,6-0,9 mm Blue 1 5 m 0,6-0,9 mm Blue 1 3 m 1,0-1,2 mm Red 1 4 m 1,0-1,2 mm Red 1 5 m 1,0-1,2 mm Red 1 5 m 1,0-1,2 mm Red 1 4 m 1,2-1,6 mm Yellow 1

# PLIERS MIG MULTIPURPOSE



Pliers MIG multipurpose professional new type Allows you to:

- Clean the spatters inside the MIG nozzle without removing
- Screw / unscrew the MIG contact tips
- Cut the exceeding wire out of the contact tip before starting to weld.

Art. Nr.	Descr.	Qt.	Stock class
WP21106	Pliers MIG multipurpose	1	DFW



# **VERY HIGH RELIABILITY, VERY GOOD PRICE!**

# TIGSTAR PRO

The new generation of GCE TIG Brenner with extraordinary technical characteristics at a very good PRICE! They're provided with a very slim and ergonomic shank, a ball joint at the handle and an ultra soft leather protection for cable (n/a on V version) making them fully handy. Available in two variants: Air cooled and water cooled. The spare parts are fully compatible with standard market Brenner.

#### **FEATURES**

- Optimum cooling (Air or Water)
- · Very slim and ergonomic handle.
- · Ball joint at the handle improving the handling
- Standard trigger version or knob version (model V)
- Plug TIG included (G1/4 G3/8 quick connection)
- Soft leather cover for cable (n/a on V version)
- Provided with a spare parts set (ceramic nozzle, collet body, collet, back cup long)





#### THE ONLY ONES WITH LEATHER CLAD CABLE!

The first 75cm of torch cable nearest to operator are clad in soft leather (n/a on Brenner with knob control valve).

This gives great flexibilty of movement and very good protection against spatter.



# MAXIMUM EASY USE!

All TIGSTAR Brenner are delivered complete with connection.

The gas connections included in the box are for all possible needs (1/4 or 3/8 or quick)



V version (with knob valve)

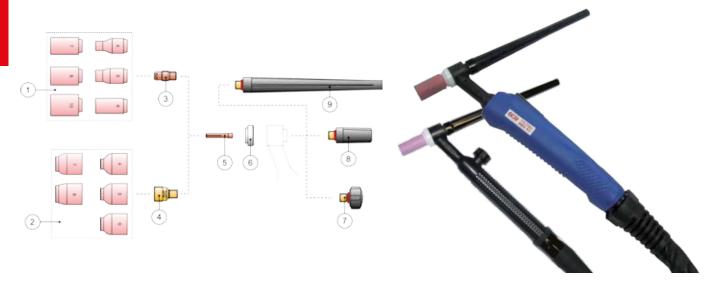


Art. Nr.	Descr.	DC 35%	AC 35%	/ø	0	Qt.	Stock class
415P09C104N	TIGSTAR PRO 9 4M	110A	95A	0,5-1,6	25 mm (small)	1	DFW
415P09C108N	TIGSTAR PRO 9 8M	110A	95A	0,5-1,6	25 mm (small)	1	MTO
405P09V104N	TIGSTAR PRO 9 V 4M	110A	95A	0,5-1,6	25 mm (small)	1	DFW
415P17C104N	TIGSTAR PRO 17 4M	140A	125A	0,5-2,4	25 mm (small)	1	DFW
415P17C114N	TIGSTAR PRO 17 4M	140A	125A	0,5-2,4	35 mm (big)	1	DFW
415P17C108N	TIGSTAR PRO 17 8M	140A	125A	0,5-2,4	25 mm (small)	1	DFW
405P17V104N	TIGSTAR PRO 17 V 4M	140A	125A	0,5-2,4	25 mm (small)	1	DFW
405P17V114N	TIGSTAR PRO 17 V 4M	140A	125A	0,5-2,4	35 mm (big)	1	DFW
415P26C104N	TIGSTAR PRO 26 4M	180A	150A	0,5-4,0	35 mm (big)	1	DFW
415P26C108N	TIGSTAR PRO 26 8M	180A	150A	0,5-4,0	35 mm (big)	1	DFW
405P26V104N	TIGSTAR PRO 26 V 4M	180A	150A	0,5-4,0	35 mm (big)	1	DFW

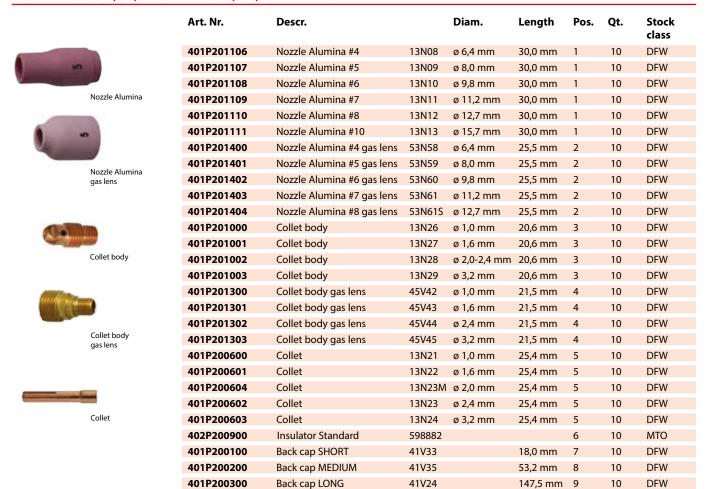
WATER COOLED Art. Nr.	Descr.	DC 100%	AC 100%	/ø	0	Qt.	Stock class
415P20C104N	TIGSTAR PRO 20 4M	250A	220A	0,5-3,2	35 mm (big)	1	DFW
415P20C108N	TIGSTAR PRO 20 8M	250A	220A	0,5-3,2	35 mm (big)	1	DFW
415P18C104N	TIGSTAR PRO 18 4M	320A	240A	0,5-4,0	35 mm (big)	1	DFW
415P18C108N	TIGSTAR PRO 18 8M	320A	240A	0,5-4,0	35 mm (big)	1	DFW



# TORCH TIGSTAR PRO 9 - 9V (AIR COOLED) TORCH TIGSTAR PRO 20 (WATER COOLED)



# TIGSTAR PRO 9 - 9V (AIR) - TIGSTAR PRO 20 (H2O) - SPARE PARTS

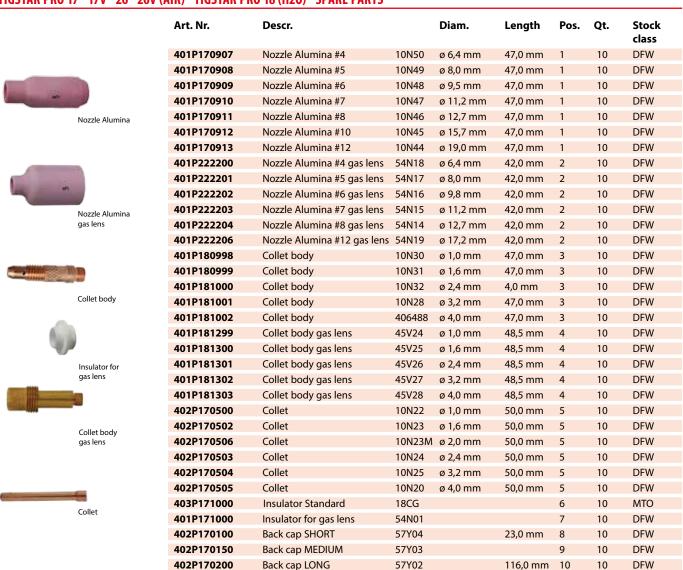




# TORCH TIGSTAR PRO 17 - 17V - 26 - 26V (AIR COOLED) TORCH TIGSTAR PRO 18 (WATER COOLED)



### TIGSTAR PRO 17 - 17V - 26 - 26V (AIR) - TIGSTAR PRO 18 (H2O) - SPARE PARTS





# **TUNGSTEN ELECTRODES**

### **TUNGSTEN PURE - GREEN (WP)**

ISO 6848: WP (W20)

Used mostly for AC welding of aluminium and magnesium and other less critical, low-current applications. It forms and maintains a clean, balled tip when heated and provides good arc stability with a reasonably good resistance to contamination. Typically not used for DC welding.

Art. Nr.	Descr.	Oxide addition	Dimension	Qt.	Stock class
400P010175	PURE (Green)	-	1,0×175 mm	10	DFW
400P016175	PURE (Green)	-	1,6×175 mm	10	DFW
400P020175	PURE (Green)	-	2,0×175 mm	10	DFW
400P024175	PURE (Green)	-	2,4×175 mm	10	DFW
400P032175	PURE (Green)	-	3,2×175 mm	10	DFW
400P040175	PURE (Green)	-	4,0×175 mm	10	DFW
400P048175	PURE (Green)	-	4,8×175 mm	5	MTO

### TUNGSTEN + THORIUM 2% - RED (WTh20)

ISO 6848: WTh20 (WT20)

Excellent for DC welding (both negative or positive polarity) on carbon steel, stainless steel, nickel and titanium. The most preferred electrode today for its long lifetime and ease of use. The Thorium improves arc ignition and allows for a higher current-carrying capacity. This electrode operates far below its melting temperature, which results in a significantly lower consumption and a greater arc stability. During welding, the Thorium is uniformly dispersed throughout the electrode, which helps the tungsten to maintain its sharpened edge. The Thoriated electrodes deposit less tungsten into the weld puddle than other types, reducing the weld contamination. Rarely used for special AC welding (very thin aluminium or materials less than 1,5 mm)

Art. Nr.	Descr.	Oxide addition	Dimension	Qt.	Stock class
400P210150	THORIATED (Red)	ThO2 - 2%	1,0×150 mm	10	DFW
400P216150	THORIATED (Red)	ThO2 - 2%	1,6×150 mm	10	DFW
400P220150	THORIATED (Red)	ThO2 - 2%	2,0×150 mm	10	DFW
400P224150	THORIATED (Red)	ThO2 - 2%	2,4×150 mm	10	DFW
400P232150	THORIATED (Red)	ThO2 - 2%	3,2×150 mm	10	DFW
400P210175	THORIATED (Red)	ThO2 - 2%	1,0×175 mm	10	DFW
400P216175	THORIATED (Red)	ThO2 - 2%	1,6×175 mm	10	DFW
400P220175	THORIATED (Red)	ThO2 - 2%	2,0×175 mm	10	DFW
400P224175	THORIATED (Red)	ThO2 - 2%	2,4×175 mm	10	DFW
400P232175	THORIATED (Red)	ThO2 - 2%	3,2×175 mm	10	DFW
400P240175	THORIATED (Red)	ThO2 - 2%	4,0×175 mm	10	DFW
400P248175	THORIATED (Red)	ThO2 - 2%	4,8×175 mm	5	MTO

# **TUNGSTEN + CERIUM 2% - GREY (WCe20)**

ISO 6848: WCe20 (WC20)

This electrode performs best in DC welding at low current settings and works well also in AC processes. It has a good ignition and very good re-ignition at low amperages, good arc stability and long life. Very popular in such applications as orbital tube and pipe fabrication, thin sheet metal work, and jobs involving small and delicate parts. Best used to weld carbon steel, stainless steel, nickel alloys, and titanium, it is a great alternative to thoriated electrode. The use at higher amperages is not recommended because the cerium oxides migrate away, thereby negating their benefits.

Art. Nr.	Descr.	Oxide addition	Dimension	Qt.	Stock class
400P510175	CERIATED (grey)	CeO2 - 2%	1,0×175 mm	10	DFW
400P516175	CERIATED (grey)	CeO2 - 2%	1,6×175 mm	10	DFW
400P520175	CERIATED (grey)	CeO2 - 2%	2,0×175 mm	10	DFW
400P524175	CERIATED (grey)	CeO2 - 2%	2,4×175 mm	10	DFW
400P532175	CERIATED (grey)	CeO2 - 2%	3,2×175 mm	10	DFW
400P540175	CERIATED (grey)	CeO2 - 2%	4,0×175 mm	10	MTO
400P548175	CERIATED (grey)	CeO2 - 2%	4,8×175 mm	5	MTO



# **TUNGSTEN ELECTRODES**

# TUNGSTEN + LANTHANUM 1,5% - GOLD (WLa15)

ISO 6848: WLa15 (WL15)

This electrode combines the characteristics of ceriated electrode and thoriated electrode. Like ceriated electrode, it has an excellent arc ignition and an excellent re-ignition, and enable to maintain the arc easily at lower voltages with a good stability. It has an excellent current conductivity, very similar to thoriated electrode and can replace it without welding setting changes worth nothing. It works well on AC or DC electrode negative with a pointed end, or on AC sine wave power sources with a balled end. It maintains easily a sharpened pointed end well, with a benefit for welding steel and stainless steel on DC or AC from square wave power sources.

Art. Nr.	Descr.	Oxide addition	Dimension	Qt.	Stock class
400P910175	LANTHANATED (gold)	La2O3 - 1,5%	1,0×175 mm	10	DFW
400P916175	LANTHANATED (gold)	La2O3 - 1,5%	1,6×175 mm	10	DFW
400P920175	LANTHANATED (gold)	La2O3 - 1,5%	2,0×175 mm	10	DFW
400P924175	LANTHANATED (gold)	La2O3 - 1,5%	2,4×175 mm	10	DFW
400P932175	LANTHANATED (gold)	La2O3 - 1,5%	3,2×175 mm	10	DFW
400P940175	LANTHANATED (gold)	La2O3 - 1,5%	4,0×175 mm	10	MTO
400P948175	LANTHANATED (gold)	La2O3 - 1.5%	4.8×175 mm	5	MTO

#### TUNGSTEN + LANTHANUM 2% - BLUE (WLa20)

ISO 6848: WLa20 (WL20)

This is an all-purpose tungsten electrode that combines the best features of all the other electrodes. Excellent arc ignition and re-ignition, very good arc stability, excellent current conductivity, the best in maintaining the sharpened end, the longest lifetime. Suitable for the use both on AC or DC. Excellent performance both in low and high amperage applications. It works great for welding carbon steel, stainless steel, nickel alloys, aluminium, magnesium, titanium, cobalt, copper alloys, and all other metals. Perfect to replace, with a longer lifetime, thoriated electrodes in automated systems welding stainless steel on DC. Even during this intensive use, it maintains better the tip geometry.

Art. Nr.	Descr.	Oxide addition	Dimension	Qt.	Stock class
400P310175	LANTHANATED (blue)	La2O3 – 2%	1,0×175 mm	10	MTO
400P316175	LANTHANATED (blue)	La2O3 – 2%	1,6×175 mm	10	DFW
400P320175	LANTHANATED (blue)	La2O3 – 2%	2,0×175 mm	10	DFW
400P324175	LANTHANATED (blue)	La2O3 – 2%	2,4×175 mm	10	DFW
400P332175	LANTHANATED (blue)	La2O3 – 2%	3,2×175 mm	10	DFW
400P340175	LANTHANATED (blue)	La2O3 – 2%	4,0×175 mm	10	MTO
400P348175	LANTHANATED (blue)	La2O3 – 2%	4,8×175 mm	5	MTO

# **TUNGSTEN ELECTRODES SELECTION**

Color	Туре	Current	For welding	Arc Ignition	Arc Stability	Current Car- rying Capacity	Lifetime
Green	Pure	AC	Aluminium, Magnesium, Nickel and their alloys	Medium	Good	Low	Low
Red	Thoriated ThO2 - 2%	DC	Carbon steel, Stainless steel, Nickel alloys and Titanium	Excellent	Excellent	Excellent	Very good
Grey	Ceriated CeO2 - 2%	AC & DC (low amp)	Carbon steel, Stainless steel, Nickel alloys and Titanium	Very good	Very good	Very good	Very good
Gold	Lanthanated La2O3 - 1,5%	AC & DC	Carbon steel, Stainless steel, Titanium, Aluminium and its alloys	Excellent	Excellent	Excellent	Very good
Blue	Lanthanated La2O3 - 2%	AC & DC	Carbon steel, Stainless steel, Nickel alloys, Aluminium, Magnesium, Titanium, Cobalt, Copper alloys, etc.	Excellent	Excellent	Excellent	Excellent





# PREPARING THE ELECTRODE TIP

The geometry of the electrode end definitely does have an effect on the TIG arc.

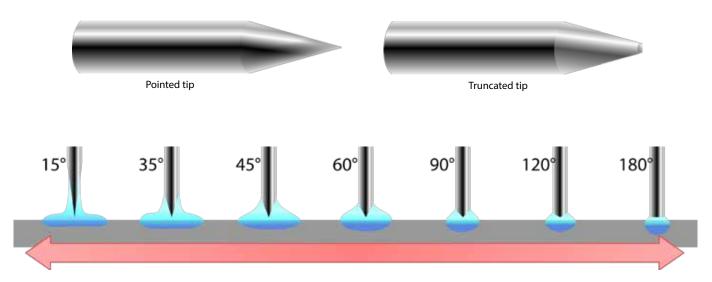
In any application, the type and the shape of tungsten helps determine the arc quality and welding performance you will achieve. The three geometries for the electrode tip are balled, pointed, and truncated.

### **BALLED TIP**

A **balled tip** generally is used on pure tungsten and zirconiated electrodes and is suggested for use with the AC process on sine wave and conventional square wave GTAW machines. To ball the end of the tungsten properly, simply apply the AC amperage recommended for a given electrode diameter, and a ball will form on the end of the electrode. The diameter of the balled end should not exceed 1,5 times the diameter of the electrode (for example, a 2,4mm electrode should form a 3,6mm diameter end). A larger sphere at the tip of the electrode can reduce arc stability and can fall off and contaminate the weld.

### POINTED and/or TRUNCATED TIP

A **pointed** and/or **truncated tip** (for pure tungsten, ceriated, lanthanated, and thoriated types) should be used for inverter AC and DC welding processes. Grinding the electrode to a conical shape eases the arc ignition and creates a more focused arc for better welding performance. Choosing a proper geometry and the right grinding angle for the electrode is strategic to obtain the best performance. The right choice depends on the result you want to obtain.



# **SHARP TIP**

- Improves the stability of yours arc
- · While welding with Less amps
- Less weld penetration
- Shorter electrode life
- Wider weld bead
- Easier arc starting

# **BLUNT TIP**

- · Higher chance of the arc wandering
- While welding with more amps
- Better weld penetration
- Longer electrode life
- Narrower weld bead
- Harder arc starting

When welding with low current on thin materials (from 0,1 mm to 1,0 mm), it is recommended to grind the electrode end to a pointed tip. A pointed tip allows the welding current to transfer in a focused arc and helps prevent thin metals (such as aluminium) from becoming distorted.

For higher-current applications, it is recommended to grind the electrode end to a truncated tip. A truncated geometry prevents the high current to blow off the tip causing weld puddle contamination. Using a pointed tip fo higher-current applications is not recommended.



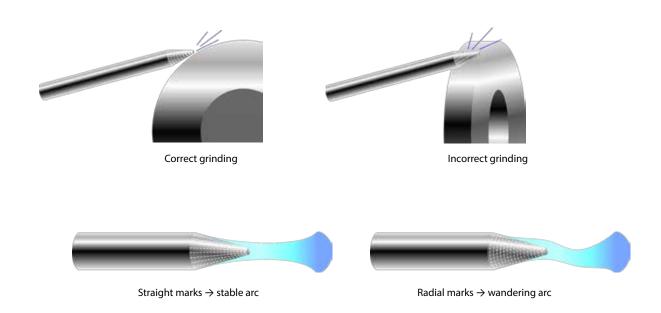


# SHARPENING THE ELECTRODE

To grind the tungsten properly and to prevent contamination, it is preferable to use a grinding wheel especially designed for tungsten grinding, resistant to tungsten's hardness. Grind the electrode straight on the direction of the wheel at a 90° angle and make sure that the grind marks are lengthwise. This way you reduce the presence of ridges on the tungsten that could create arc wandering or contamination into the weld puddle.

Note: Grinding thoriated tungsten, make sure to collect the dust and have an adequate ventilation system. Follow the manufacturer's MSDS

To achieve the proper shape, first grind the tungsten to a taper as explained above, then grind 0,2-0,5 mm the tip of the electrode to obtain a flat end. The flat end helps to prevent the tungsten is transferred through the arc and the formation of a ball end.



# **RECOMMENDED AMPERAGE (according to ISO 6848: 2015)**

	Di	irect Current (DC)			Alternative	
Electrode Diameter (mm)	Electrode negative (-)		Electrode positive 50% electrod 50% electrod		ctrode (+)	Arc Balance 30% electrode (+) 70% electrode (-)
	Tungsten with oxide additives	Tungsten with oxide additives	Pure Tungsten	Pure Tungsten	Tungsten with oxide additives	Tungsten with oxide additives
1,0 mm	10-75 A	not applicable	not applicable	25-60 A	25-75 A	25-80 A
1,6 mm	45-150 A	10-20 A	10-20 A	50-100 A	40-110 A	40-125 A
2,0 mm	60-200 A	15-25 A	15-25 A	60-130 A	60-130 A	60-150 A
2,4 mm	75-220 A	15-30 A	15-30 A	70-130 A	65-150 A	60-175 A
3,2 mm	85-330 A	20-35 A	20-35 A	90-150 A	75-170 A	75-250 A
4,0 mm	100-400 A	35-50 A	35-50 A	95-170 A	85-210 A	85-310 A
4,8 mm	120-480 A	50-70 A	50-70 A	100-240 A	90-300 A	95-340 A





# PLASMA HAND CUTTING TORCHES



# **SOLARIS**

The SOLARIS torches are the new torches for Hand Plasma Cutting by GCE with excellent performance. High cutting speed and high quality of cut make these torches very efficient. Ergonomic handle and central connections provide ease of use and practicability. Suitable for the most demanding users. Excellent value for money.

### **FEATURES**

- Ergonomic handle.
- Trigger protection against accidental starting.
- Strong and ergonomic Central connection.
- Consumables fully interchangeable with torches of other brands.
- Accessories included.



Ergonomic Handle



Trigger protection



Central connection EURO type



Accessories included

TP001120



IGNITION WITH HIGH FREQUENCY		Duty		0	_		
Art. Nr.	Descr.	Cycle 60%	$\bigcirc$	-Op	Ţ.	Qt.	Stock class
TP001000	SOLARIS B50 – 6m	50 A	4.5-5.0 bar	165 l/min	10-15 mm	1	DFW
TP001010	SOLARIS B70 – 6m	70 A	4.5-5.0 bar	170 l/min	18-24 mm	1	DFW
TP001020	SOLARIS B100 – 6m	100 A	4.5-5.0 bar	180 l/min	24-30 mm	1	DFW
TP001030	SOLARIS B150 – 6m	150 A	4.5-5.0 bar	200 l/min	35-40 mm	1	DFW
TP001100	SOLARIS F81 – 6m	80 A	4.5-5.0 bar	155 l/min	20-25 mm	1	DFW
TP001110	SOLARIS F101 – 6m	100 A	4.5-5.0 bar	180 l/min	25-30 mm	1	DFW

#### IGNITION WITHOUT HIGH EREQUENCY

IGNITION WITHOUT	HIGH FREQUENCT						
Art. Nr.	Descr.	Duty Cycle <b>60</b> %	$\bigcirc$	a Ba	<u>t</u>	Qt.	Stock class
TP001200	SOLARIS B60 – 4m	60 A	4.5-5.0 bar	116 l/min	12-20 mm	1	MTO

SOLARIS F141 – 6m 140 A 4.5-5.0 bar 210 l/min 35-40 mm 1 DFW

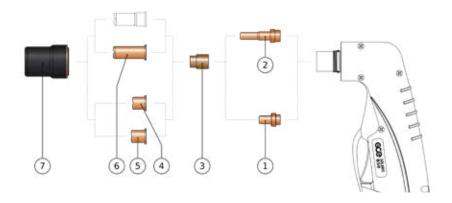






# **PLASMA TORCH SOLARIS B50**



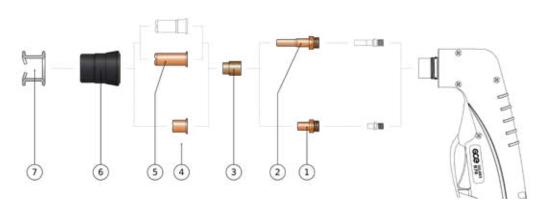


# **SOLARIS B50 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002200	Electrode Hf	1521- Hf	1	10	DFW
TP002203	Electrode Extended Hf	1518- Hf	2	10	DFW
TP002150	Swirl ring	20101	3	2	DFW
TP002301-10	Tip D.1,0 mm (50A)	1304	4	10	DFW
TP002302-10	Tip D.1,0 mm Long life (50A)	1396	5	10	DFW
TP002302-11	Tip D.1,1 mm Long life (60A)		5	10	DFW
TP002303-10	Tip Extended D.1,0 mm (50A)	1370	6	10	DFW
TP002304-10	Tip Extended D.1,0 mm Long life (50A)	1395	6	10	DFW
TP002304-11	Tip Extended D.1,1 mm Long life (60A)		6	10	DFW
TP002400	Shield Cup	5710121	7	2	DFW

# **PLASMA TORCH SOLARIS B70**





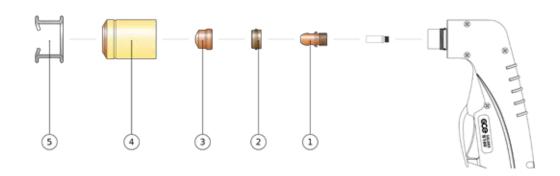
# **SOLARIS B70 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002201	Electrode Hf	1402	1	10	DFW
TP002204	Electrode Extended Hf	1368	2	10	DFW
TP002150	Swirl ring	20101	3	2	DFW
TP002302-10	Tip D.1,0 mm Long life (50A)	1396	4	10	DFW
TP002302-11	Tip D.1,1 mm Long life (60A)		4	10	DFW
TP002302-12	Tip D.1,2 mm Long life (70A)	1308	4	10	DFW
TP002304-10	Tip Extended D.1,0 mm Long life (50A)	1395	5	10	DFW
TP002304-11	Tip Extended D.1,1 mm Long life (60A)		5	10	DFW
TP002304-12	Tip Extended D.1,2 mm Long life (70A)		5	10	DFW
TP002402	Shield Cup	5710171	6	2	DFW
TP002450	Spacer spring	1394	7	10	DFW



# **PLASMA TORCH SOLARIS B100**



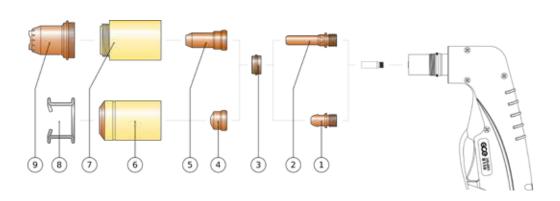


# **SOLARIS B100 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002202	Electrode Hf	1376	1	10	DFW
TP002151	Swirl ring	1377	2	2	DFW
TP002310-13	Tip D.1,35 mm (100A)	1372	3	10	DFW
TP002310-16	Tip D.1,6 mm (130A)	1373	3	10	DFW
TP002410	Shield Cup		4		DFW
TP002451	Spacer spring	1386	5	10	DFW

# **PLASMA TORCH SOLARIS B150**





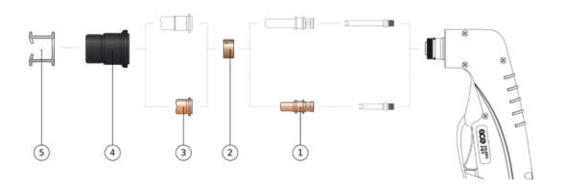
# **SOLARIS B150 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002202	Electrode Hf	1376	1	10	DFW
TP002205	Electrode Extended Hf	1517	2	10	DFW
TP002151	Swirl ring	1377	3	2	DFW
TP002310-13	Tip D.1,35 mm (100A)	1372	4	10	DFW
TP002310-16	Tip D.1,6 mm (130A)	1373	4	10	DFW
TP002310-18	Tip D.1,8 mm (150A)	1374	4	10	DFW
TP002312-13	Tip Extended D.1,35 mm (100A)		5	10	DFW
TP002312-16	Tip Extended D.1,6 mm (130A)		5	10	DFW
TP002312-18	Tip Extended D.1,8 mm (150A)		5	10	DFW
TP002403	Shield Cup	1389	6	2	DFW
TP002404	Shield Cup Contact	60350	7	2	DFW
TP002451	Spacer spring	1386	8	10	DFW
TP002459	Spacer drag		9	2	DFW



# **PLASMA TORCH SOLARIS F81**



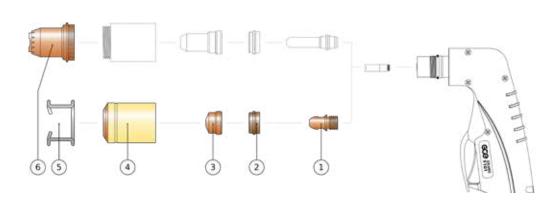


# **SOLARIS F81 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002206	Electrode Hf	PE0109	1	10	DFW
TP002152	Swirl ring	PE0107	2	2	DFW
TP002313-11	Tip D.1,1 mm (60A)	PD0105-11	3	10	DFW
TP002313-12	Tip D.1,2 mm (80A)	PD0105-12	3	10	DFW
TP002405	Shield Cup	PC0115	4	2	DFW
TP002452	Spacer spring	CV0028	5	10	DFW

# **PLASMA TORCH SOLARIS F101**





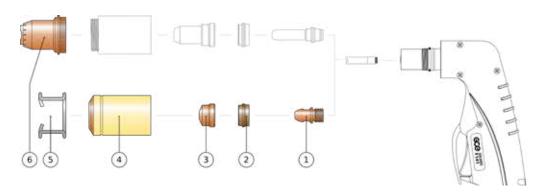
# **SOLARIS F101 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002207	Electrode Hf	PR0101	1	10	DFW
TP002153	Swirl ring	PE0101	2	2	DFW
TP002315-14	Tip D.1,4 mm (100A)	PD0101-14	3	10	DFW
TP002315-17	Tip D.1,7 mm (130A)	PD0101-17	3	10	DFW
TP002406	Shield Cup Long life	PC0111	4	2	DFW
TP002453	Spacer spring	CV0011	5	10	DFW
TP002459	Spacer drag	CV0009	6	2	DFW



# PLASMA TORCH SOLARIS F141



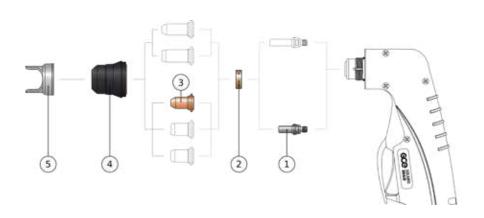


# **SOLARIS F141 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002207	Electrode Hf	PR0101	1	10	DFW
TP002153	Swirl ring	PE0101	2	2	DFW
TP002315-14	Tip D.1,4 mm (100A)	PD0101-14	3	10	DFW
TP002315-17	Tip D.1,7 mm (130A)	PD0101-17	3	10	DFW
TP002408	Shield Cup Long life	PC0102	4	2	DFW
TP002453	Spacer spring	CV0011	5	10	DFW
TP002459	Spacer drag	CV0009	6	2	DFW

# PLASMA TORCH SOLARIS M60





# **SOLARIS M60 – SPARE PARTS**

Art. Nr.	Descr.		Pos.	Qt.	Stock class
TP002212	Electrode – Back striking	52582	1	10	DFW
TP002155	Swirl ring	60028	2	2	DFW
TP002320-08	Tip D.0,8 mm (30A) – Back striking	51318.08	3	10	DFW
TP002320-09	Tip D.0,9 mm (40A) – Back striking	51318.09	3	10	DFW
TP002320-10	Tip D.1,0 mm (50A) – Back striking	51318.10	3	10	DFW
TP002320-11	Tip D.1,1 mm (60A) – Back striking	51318.11	3	10	DFW
TP002412	Shield Cup 6 holes (GLADIUS 40)	60389	4	2	DFW
TP002415	Shield Cup 4 holes (GLADIUS 40 COMP)		4	2	DFW
TP002458	Spacer double pointed	60432	5	2	DFW



# **AIR CARBON-ARC TORCHES**

# **AIR CARBON-ARC GOUGING TORCHES**





The air carbon-arc process physically removes metal, not chemically as in oxy-fuel cutting. Gouging or cutting occurs when the intense heat of the arc between the carbon electrode and the workpiece melts part of the workpiece. Simultaneously, air passes through the arc quickly enough to blow the molten material away.

#### DIMENSIONS

- Torch: 25 cm
- Cable: 210 cm (7 ft.)
- 360° swivel cable (no cable twist)
- impact and heat resistant insulators

Art. Nr.	Descr.			Qt.	Stock class
52040	Torch 600 A	for medium duty application	K2	1	DFW
52041	Torch 1000 A	for heavy duty application	K4	1	DFW
52042	Torch 1250 A	for heavy duty application	K5	1	DFW

# **CARBON ELECTRODES POINTED**

Art. Nr.	Long	0	Qt.	Stock class
52104	305 mm	4 mm	100	DFW
52105	305 mm	5 mm	100	DFW
52106	305 mm	6 mm	100	DFW
52108	305 mm	8 mm	100	DFW
52110	305 mm	10 mm	100	DFW
52113	305 mm	13 mm	100	DFW



# **ELECTRODE HOLDERS**

# **PRATICA**



Ergonomic handle with anti-slip notches. Clamp with grooves allowing the electrode to be fitted in multi positions for an easier positioning to the work piece.

- STANDARD: EN 60974-11
- Insulation class B
- Electrode fixing in 7 positions
- Solid brass body



#### TECHNICAL DATA

	(kg	شننذ	Outy Cycle 35%	Cycle 60%	Ø	mm <sup>2</sup>
Pratica 1	330 g	200 mm	260 A	200 A	4,0	25-35
Pratica 2	390 g	245 mm	350 A	250 A	5,0	35-50
Pratica 3	480 g	275 mm	520 A	400 A	6,3	50-70

Art. Nr.	Descr.	Qt.	Stock class
17200260	Electrode holder Pratica 1-260	1	DFW
17200350	Electrode holder Pratica 2-350	1	DFW
17200520	Electrode holder Pratica 3-520	1	DFW

# **DELFIN**



High specification electrode holder with heavy front insulation and anti-slip handle. The clamp with grooves allows the electrode to be fitted in multi positions for an easier positioning to the work piece. The retaining spring completely protected is easy to remove. The design of the electrode clamp offers extra protection, as the electrode is surrounded by insulating material reducing the possibility of accidental contact with the operator or other metallic parts.

- STANDARD: EN 60974-11
- Insulation class B

	kg	المنشلا	Cycle 35%	Cycle 60%	Ø	mm <sup>2</sup>	
DELFIN-1	-	-	250 A	200 A	2,5-4,0	25-35	
DELFIN-2	-	-	300 A	250 A	3,2-5,0	35-50	
DELFIN-3	-	-	400 A	300 A	4,0-6,3	50-70	

Art. Nr.	Descr.	Qt.	Stock class
WP21054	Electrode holder DELFIN-1 250A	1	DFW
WP21055	Electrode holder DELFIN-2 300A	1	DFW
WP21056	Electrode holder DELFIN-3 400A	1	DFW



# **ELECTRODE HOLDERS**

### **CROCODILE**



Crocodile electrode holders have a ribbed handle providing a firm grip and good balance. The spring is shielded to prevent damage from spatter and cable fixing is by means of a bolt and copper ferrule (supplied). One of the most popular electrode holders on the market, these are heavy duty.

- STANDARD: EN 60974-11
- Insulation class B

### TECHNICAL DATA

	kg	ششا	Duty Cycle 35%	Duty Cycle <b>60</b> %	ø	$mm^2$
Crocodile 400	445 g	235 mm	400 A	300 A	4,0	35
Crocodile 600	630 g	250 mm	600 A	450 A	6,3	70

Art. Nr.	Descr.	Qt.	Stock class
53104	Electrode holder Crocodile 400	1	DFW
53106	Electrode holder Crocodile 600	1	DFW

# **SHARK**



Electrode holder for all welding applications, available for high current values. High impact resistance and very easy to use.

- STANDARD: EN 60974-11
- Insulation class B

#### TECHNICAL DATA

	kg	لثلثلا	Cycle 35%	Cycle 60%	Ø	mm <sup>2</sup>	
Shark 200	-	-	150 A	115 A	2,5	16	
Shark 300	-	-	250 A	200 A	3,2	25	
Shark 400	-	-	350 A	270 A	4,0	35	
Shark 550	-	-	500 A	380 A	5,0	50	

# **EXCELLENT VALUE FOR MONEY**

Art. Nr.	Descr.	Qt.	Stock class
548800000160	Electrode holder Shark 200	1	DFW
548800000260	Electrode holder Shark 300	1	DFW
548800000350	Electrode holder Shark 400	1	DFW
548800000500	Electrode holder Shark 550	Ĩ	DFW

# **TWIST**



TWIST is an electrode holder completely shielded in the front part. The electrode is positioned at 90 degrees and blocked by rotating the shank. In operation the electrode is completely hidden from the outside reducing the risk of short circuit. Suitable particularly for welding in plain or vertical.

- STANDARD: EN 60974-11
- Insulation class B

	kg	لنشلا	Cycle 35%	Cycle 60%	Ø	mm <sup>2</sup>	
Twist 400	-	-	400 A	300 A	4,0	35	
Twist 600	-	_	600 A	450 A	6.3	70	

Art. Nr.	Descr.	Qt.	Stock class
53524	Electrode holder Twist 400	1	DFW
53526	Electrode holder Twist 600	1	DFW



# **ELECTRODE HOLDERS**

### **VESTALE®**





The electrode holder VESTALE® is completely made in France. The design is very compact making the device strong and reliable. The electrode is fixed by screwing. Completely insulated.

STANDARD: EN 60974-11



### TECHNICAL DATA

	kg	لثلثلا	Duty Cycle 35%	Duty Cycle <b>60</b> %	Ø	mm <sup>2</sup>
Vestale® 500	485 g	-	600 A	500 A	6,3	95

Art. Nr.Descr.Qt.Stock classD150102Electrode holder Vestale\* 5001DFW

#### **COBRA®**



COBRA® is an electrode holder entirely made in France with a compact design. The electrode is fixed by brass clamps. Completely insulated.

STANDARD: EN 60974-11



### TECHNICAL DATA

	kg	لثشة	Duty Cycle 35%	Outy Cycle 60%	Ø	mm <sup>2</sup>
Cobra®	295 g	-	300 A	250 A	4,0	35

Art. Nr.Descr.Qt.Stock classD150104Electrode holder Cobra®1DFW

# **STUBBY**®





The original STUBBY fixes the electrode by rotating the shank. STANDARD: EN 60974-11  $\,$ 

Insulation class: B.



#### TECHNICAL DATA

	kg	شننذ	Outy Cycle 35%	Cycle 60%	Ø	mm <sup>2</sup>	
Stubby® 300	450 g	-	400 A	300 A	6,3	50	

Art. Nr. Descr. Qt. Stock class
D150103 Electrode holder Stubby® 300 1 DFW

# **STUNTY**





The electrode holder STUNTY has a brass body and a handle with rubber shock-proof coating. The electrode can be fixed in two positions by rotating the shank.

STANDARD: EN 60974-11 Insulation class: A

#### **TECHNICAL DATA**

	kg	لثنثذ	Duty Cycle 35%	Cycle 60%	Ø	$mm^2$
Stunty 400	545g	255 mm	300 A	250 A	5,0	50-70

Art. Nr.Descr.Qt.Stock classD150105SElectrode holder Stunty 4001DFW



# **EARTH CLAMPS**

# **ECO-MAS**



Earth clamps designed for semi-professional use, for general use with small welding machines (transformers or small inverters up to 150A). Cable fixing directly at the point of contact.

STANDARD: EN 60974-13

# **TECHNICAL DATA**

	kg	لثلثلا	Duty Cycle 35%	Cycle 60%	mm²	
Eco-mas 150	190 g	170 mm	200 A	150 A	16-25	
Eco-mas 200	190 g	170 mm	250 A	200 A	25-35	

Art. Nr.	Descr.	Shunt	Qt.	Stock class
WP21038	Earth clamp Eco-mas 150	Copper plate	1	DFW
WP21039	Earth clamp Eco-mas 200	Copper braid	1	DFW

# **ECO-MAS PLUS**



Earth clamps designed for semi-professional use, for general use with small welding machines. Cable fixing directly at the point of contact. Insulated handle. STANDARD: BS-638.5

# **TECHNICAL DATA**

	kg	شننذ	Outy Cycle 35%	Duty Cycle 60%	mm <sup>2</sup>	
Eco-mas plus 200	-	-	200 A	150 A	-	
Eco-mas plus 400	-	-	400 A	300 A	-	

Art. Nr.	Descr.	Qt.	Stock class
10000022	Earth clamp Eco-mas plus 200	1	DFW
10000023	Earth clamp Eco-mas plus 400	1	DFW

### **ZBS**



Earth clamps for professional use with copper plate shunt and copper contacts. Cable fixing at the body. STANDARD: BS-638.5

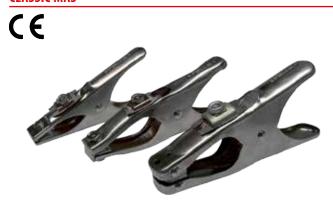
	kg	لنشند	Cycle 35%	60%	mm <sup>2</sup>	
ZBS-35	-	-	200 A	160 A	35	
ZBS-70	-	-	400 A	315 A	70	
ZBS-90	-	-	600 A	500 A	95	

Art. Nr.	Descr.	Shunt	Qt. Stock class
090000340	Earth clamp ZBS-35	Copper plate	1 DFW
09000341	Earth clamp ZBS-70	Copper plate	1 DFW
09000342	Earth clamp ZBS-90	Copper plate	1 DFW



# **EARTH CLAMPS**

# **CLASSIC-MAS**



HIGH PERFORMANCE earth clamps realized with attention to details. The model 400 is equipped with copper braid inside while the model 650 with double copper braid with the aim to optimize the conductivity and minimize the electric discharge. Thanks to the very good contacts realization, an high conductivity is always guaranteed. The clamp spring is soft and easy to use. For all professional users.

STANDARD: EN 60974-13

#### **TECHNICAL DATA**

	kg	المنتلا	Duty Cycle 35%	Cycle 60%	mm <sup>2</sup>	
Classic-mas 200	280 g	170 mm	250 A	200 A	25	
Classic-mas 400	310 g	200 mm	400 A	300 A	50	
Classic-ma5s 650	550 g	210 mm	600 A	500 A	70	

Art. Nr.	Descr.	Shunt	Qt.	Stock class
WP21009	Earth clamp Classic-mas 200	copper plate	1	DFW
53204	Earth clamp Classic-mas 400	copper braid	1	DFW
WP21037	Earth clamp Classic-mas 650	double copper braid	1	DFW

# **BRASS-MAS PRO**



Earth clamp for professional use. For big welding machines. Cast brass construction.

STANDARD: EN 60974-13

#### **TECHNICAL DATA**

	<b>k</b> g	ششذ	Cycle 35%	Cycle 60%	mm <sup>2</sup>	
Brass-mas PRO 300	-	-	250 A	200 A	25	
Brass-mas PRO 500	-	-	500 A	400 A	50	

Art. Nr.	Descr.	Qt.	Stock class
WP21046	Earth clamp Brass-mas PRO 300	1	DFW
WP21041	Earth clamp Brass-mas PRO 500	1	DFW

# ML-MAS







Earth clamp for professional use. For big welding machines. Cast brass construction.

STANDARD: EN 60974-13

	kg	لنشنا	Cycle 35%	Cycle 60%	mm <sup>2</sup>	
ML-mas 300	-	-	250 A	200 A	25	
ML-mas 500	-	-	400 A	300 A	35	

Art. Nr.	Descr.	Qt.	Stock class
D150215	Earth clamp ML-mas 300 (French style)	1	DFW
D150216	Earth clamp ML-mas 500 (French style)	1	DFW



# **EARTH CLAMPS**

# X-MAS



Earth clamp with cable fixing at the point of contact. STANDARD: BS-638.5

### TECHNICAL DATA

	kg	لنشند	Cycle 35%	Cycle 60%	$mm^2$	
X-mas 300	-	-	400 A	300 A	35	
X-mas 400	-	-	500 A	400 A	50	
X-mas 500	-	-	600 A	500 A	70	

Art. Nr.	Descr.	Qt.	Stock class
B1300A	Earth clamp X-mas 300	1	DFW
B2400A	Earth clamp X-mas 400	1	DFW
B3500A	Earth clamp X-mas 500	1	DFW

# STRONG-MAS



ULTRA PROFESSIONAL screw driven earth clamps intended for semi permanent use where a perfect electrical connection is essential (600A). Insulated handle. STANDARD: EN 60974-13

- aluminum body
- handle in fiber

### TECHNICAL DATA

	kg	لثلثلا	Cycle 35%	Cycle 60%	mm <sup>2</sup>	
Strong-mas 600	-	-	600 A	450 A	50-70	

Art. Nr.	Descr.	Qt.	Stock class
WP21044	Earth clamp Strong-mas 600	1	DFW

# **SCREW-MAS**



Earth clamps cast out of brass for high conductivity, with a wide footprint to give maximum contact area. Designed for industrial applications where a permanent contact and the maximum conductivity are required.

STANDARD: EN 60974-13

	kg	لثنثذ	Cycle 35%	Cycle 60%	mm <sup>2</sup>	
Screw-mas 500	-	-	500 A	400 A	50	
Screw-mas 600	-	-	600 A	500 A	70	

Art. Nr.	Descr.	Qt.	Stock class
WP21042	Earth clamp Screw-mas 500	1	DFW
WP21043	Earth clamp Screw-mas 600	1	DFW



# **CABLES AND CONNECTORS**

# **COPPER CABLES WITH COVER IN PVC**





Multipurpose cable with copper conductor, insulated with polyvinyl chloride, flame retardant and oil and chemical resistant, conform to 2006/95/EEN (Low Voltage Directive).

Art. Nr.		$\frac{1}{m}$	60%	Qt.	Stock class
341000111016	PVC	16 mm <sup>2</sup>	175 A	100 m	DFW
341000111025	PVC	25 mm <sup>2</sup>	230 A	100 m	DFW
341000111035	PVC	35 mm <sup>2</sup>	290 A	50 m	DFW
341000111050	PVC	50 mm <sup>2</sup>	365 A	50 m	DFW
341000111070	PVC	70 mm <sup>2</sup>	460 A	50 m	DFW
341000111095	PVC	95 mm²	560 A	50 m	DFW
341000111120	PVC	120 mm <sup>2</sup>	650 A	50 m	MTO

# **COPPER CABLES WITH COVER IN NEOPRENE (WELDING CABLES)**



HD22.6 S2

Arc welding cable with copper conductor, insulated with rubber, flame retardant and oil and chemical resistant, conform to 2006/95/EEN (Low Voltage Directive).

Type designation: H0	1N2-D
----------------------	-------

Art. Nr.		mm²	Cycle 60%	Qt.	Stock class
WP21160	Neoprene	16 mm <sup>2</sup>	175 A	100 m	MTO
WP21162	Neoprene	25 mm <sup>2</sup>	230 A	100 m	DFW
WP21164	Neoprene	35 mm <sup>2</sup>	290 A	100 m	DFW
WP21166	Neoprene	50 mm <sup>2</sup>	365 A	50 m	DFW
WP21168	Neoprene	70 mm <sup>2</sup>	460 A	50 m	DFW

# **SOCKETS AND PLUGS**













# WELDING CABLE SOCKETS & PLUGS

Art. Nr.		$\langle \Phi \rangle$		$mm^2$	Max A	Ot.	Stock class
Art. IVI.		•		111111	IVIAX A	Qt.	Stock class
711P001003	Socket	14 mm	9 mm (small)	10-25 mm <sup>2</sup>	200 A	1	DFW
711P001103	Socket	21 mm	13 mm (big)	35-50 mm <sup>2</sup>	300 A	1	DFW
711P001203	Socket	21 mm	13 mm (big)	50-70 mm <sup>2</sup>	400 A	1	DFW
711P001303	Socket	21 mm	13 mm (big)	70-95 mm <sup>2</sup>	500 A	1	DFW
711P001005	Plug	14 mm	9 mm (small)	10-25 mm <sup>2</sup>	200 A	1	DFW
711P001105	Plug	21 mm	13 mm (big)	35-50 mm <sup>2</sup>	300 A	1	DFW
711P001205	Plug	21 mm	13 mm (big)	50-70 mm <sup>2</sup>	400 A	1	DFW
711P001305	Plug	21 mm	13 mm (big)	70-95 mm <sup>2</sup>	500 A	1	DFW

#### MACHINE PANEL SOCKETS





Art. Nr.		$\langle \Phi \rangle$		$\frac{1}{\text{mm}^2}$	Max A	Qt.	Stock class
711P001004	Socket	14 mm	9 mm (small)	10-25 mm <sup>2</sup>	200 A	1	DFW
711P001104	Socket	21 mm	13 mm (big)	35-70 mm <sup>2</sup>	400 A	1	DFW
711P001304	Socket	21 mm	13 mm (big)	70-95 mm <sup>2</sup>	500 A	1	DFW







# **ELECTRODES RUTILES FOR MMA WELDING (SMAW)**

### **RUTILE ELECTRODE - (ARC MAGIC S)**



#### ALL POSITIONS RUTILE ELECTRODE.

This electrode can really be used universally. It can be used in any position and with many different applications. It provides an exceptional self-assurance for welders. Good weld bead appearance. Easy slag removal.

#### **WELDABLE STEEL RANGE:**

General purpose construction steels

#### MAIN APPLICATION:

Metal structures in general, sheet metal, piping, metal works, containers, tanks, boilers, handicrafts, ironmongery, etc ...

#### **ADVANTAGES:**

- Universal all positions
- Excellent handling
- Smooth and stable arc
- Self-releasing slag



Art. Nr.	Ø×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
C101021S	1,6×300 mm	573	3,6	3	DFW
C101022S	2,0×300 mm	292	3,0	3	DFW
C101023S	2,5×350 mm	220	4,2	3	DFW
C101024S	3,2×350 mm	133	4,0	3	DFW
C101025S	3,2×450 mm	133	5,1	3	DFW
C101026S	4,0×350 mm	88	4,0	3	DFW
C101027S	4,0×450 mm	82	4,7	3	DFW



Art. Nr.	Ø×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E220101S	2,0×300 mm	93	1,0	1	DFW
E220102S	2,5×350 mm	56	1,0	1	DFW
E220103S	3,2×350 mm	34	1,0	1	DFW



#### **TECHNICAL DATA**

Standards:	ISO 2560-A: E 42 0 RC 11 AWS A5.1: E 6013
Typical Weld Metal Composition (%):	Fe (base) C<0,10 Mn=0,6 Si=0,4 S<0,025 P<0,025
All Weld Metal Mechanical Properties:	Rp0.2 >400 MPa Rm 510-580 MPa A5 >22%
Electrode polarity:	Negative
Output Circuit Voltage (OCV):	~ 40V

# **RUTILE ELECTRODE WITH HIGH MECHANICAL CHARACTERISTICS - (DIANE TS)**



# ALL POSITIONS RUTILE ELECTRODE.

Universal rutile electrode to be used in any position and with many different applications. Mechanical characteristics slightly superior to the ARC MAGIC S.

Exceptional operability for welders. Good resistance to splitting and good weld bead appearance. Easy slag removal.

### **WELDABLE STEEL RANGE:**

General purpose construction steels

## MAIN APPLICATION:

Metal structures in general, sheet metal, piping, metal works, containers, tanks, boilers, handicrafts, ironmongery, etc ...

## **ADVANTAGES:**

- Universal all positions
- Excellent handling for welders
- Smooth and stable arc
- Self-releasing slag



Art. Nr.	Ø×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
C101331S	2,0×300 mm	292	3,0	3	DFW
C101332S	2,5×350 mm	220	4,1	3	DFW
C101333S	3,2×350 mm	133	4,0	3	DFW
C101335S	4,0×350 mm	88	4,0	3	DFW



TECHNICIE DIAM	
Standards:	ISO 2560-A: E 42 0 RC 11 AWS A5.1: E 6013
Typical Weld Metal Composition (%):	Fe (base) C<0,10 Mn=0,45 Si=0,4 S<0,025 P<0,025
All Weld Metal Mechanical Properties:	Re >420 MPa Rm 510-580 MPa A5 >22%
Electrode polarity:	Negative
Output Circuit Voltage (OCV):	~ 40V



## **BASIC ELECTRODES FOR MMA WELDING (SMAW)**

## **BASIC ELECTRODE WITH HIGH WELDABILITY - (DIANE BT)**



## BASIC ELECTRODE DOUBLE COATED.

Basic coated electrode presenting exceptional welding characteristics due to its double coating. Arc very stable. Almost spatter-free. Easy removal of the slag.

Recommended for root passes and on badly prepared joints. INCREDIBLY EASY TO USE.

#### **WELDABLE STEEL RANGE:**

Construction steels for general use, Tube steels, Ship steels, Steels for Boiler and Pressure Vessels, High strength steels, Heat resisting steels, Cold tough steels.

## MAIN APPLICATION:

Frames, heavy supports, shipbuilding, pressure vessels, metal constructions and all repair works.

#### **ADVANTAGES:**

- Excellent handling for welders
- High resistance to cracking
- Smooth and stable arc
- Easy slag removal



Art. Nr.	Ø×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
C102404S	2,5×350 mm	167	3,3	3	DFW
C102405S	3,2×350 mm	89	3,0	3	DFW
C102407S	4,0×450 mm	62	4,0	3	DFW



Standards:	ISO 2560-A: E 38 2 B 12 H10 AWS A5.1: E 7016
Typical Weld Metal Composition (%):	Fe (base) C<0,10 Si0,7 Mn0,9 P<0,02 S<0,02
All Weld Metal Mechanical Properties:	Re 450 MPa Rm 550 MPa A5 27%
Electrode polarity:	Positive
Output Circuit Voltage (OCV):	~ 70V





## STAINLESS STEEL ELECTRODES FOR MMA WELDING (SMAW)

## STAINLESS STEEL 316L RUTILE-BASIC ELECTRODE - (INOX RR316LC)



#### STAINLESS STEEL RUTILE ELECTRODE.

It is a Rutile-basic electrode, providing a weld metal in low carbon austenitic stainless steel (316L). Used for welding of 18/8/3 austenitic stainless steels and cladded steels. It provides an excellent resistance to corrosion. Smooth welding. Easy slag removal.

#### **WELDABLE STEEL RANGE:**

18/8/3 type stainless steels (316L) and similar grades.

#### MAIN APPLICATION:

Chemical and petrochemical industries, ship building, tanks, pipes, heat exchangers, food industry.

#### **ADVANTAGES:**

- Low carbon universal stainless steel
- Excellent corrosion resistance
- Excellent handling for welders
  - Coating with very low moisture absorption



Art. Nr.	0×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E310101S	1,6×250 mm	235	1,5	1	DFW
E310102S	2,0×300 mm	145	1,7	1	DFW
E310103S	2,5×350 mm	90	2,0	1	DFW
E310104S	3,2×350 mm	55	1,9	1	DFW

Art. Nr.	0×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E220105S	2,5×350 mm	15	0,330	1	DFW
E220106S	3,2×350 mm	10	0,350	1	DFW



#### **TECHNICAL DATA**

Standards:	ISO 3581-A: E 19 12 3L R 32 AWS A5.4: E316L-16
Typical Weld Metal Composition (%):	Fe (base) C<0,03 Si0,8 Mn0,7 Cr18,5 Ni12,0 Mo2,7
All Weld Metal Mechanical Properties:	Rp0.2 >400 MPa Rm >560 MPa A5 >35%
Electrode polarity:	Positive
Output Circuit Voltage (OCV):	~ 70V

## **STAINLESS STEEL 312 ELECTRODE - (INOX 29.10R)**



### STAINLESS STEEL RUTILE ELECTRODE FOR REPAIRING.

Rutile-basic electrode with an enhanced mechanical characteristic of the deposit of stainless steel. Highly resistant to cracking. Welding all low-alloy and high-alloy steels. It is a multipurpose electrode for high security repairs. Soft fusion, nice appearance of the beads, self releasing slag.

## WELDABLE STEEL RANGE:

Carbon steel, galvanized steel, stainless steel, tool steel, manganese steel, etc...

## MAIN APPLICATION:

Repairing and maintenance on dissimilar, difficult-to-weld or unidentified steels.

Suitable for buffer layers before hardfacing, building up piston rods, gears...



- Ideally universal
- High resistance
- Stainless deposit
- Nice appearance of the weld beads



# Art. Nr. Ø×Long Pcs/pack Kg/pack Packs/box Stock class E290101S 2,5×300 mm 95 1,7 1 DFW E290102S 3,2×350 mm 60 2,0 1 DFW

Art. Nr.	0×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E220110S	2,5×300 mm	15	0,270	1	DFW
E220111S	3,2×350 mm	10	0,340	1	DFW



Standards:	ISO 3581-A: E 29 9 R 32 AWS A5.4: ~ E312-16
Typical Weld Metal Composition (%):	Fe (base) C<0,10 Mn=0,6 Si=1,0 Cr=29,0 Ni=9,5 Mo=0,5
All Weld Metal Mechanical Properties:	Rp0,2>500 MPa Rm=750/850 MPa A%>20
Electrode polarity:	Positive
Output Circuit Voltage (OCV):	~ 50V



## CAST IRON ELECTRODES FOR MMA WELDING (SMAW)

#### **NICKEL PURE ELECTRODE - (FUN N°1)**



#### PURE NICKEL ELECTRODE.

Graphite electrode with high percentage of nickel, for cold repairing of different grades of cast iron. Very soft fusion. High conductivity.

#### **WELDABLE STEEL RANGE:**

All grey lamellar cast irons.

#### MAIN APPLICATION:

Repairing of engine blocks, frames of tool machines, gear reducers, valve and pump bodies, cast parts.

#### **ADVANTAGES:**

- Excellent weldability in all positions, without preheating.
- Homogeneous and easy-machining deposit.
- Great deposit extension for lamellar cast iron
- Ideal for repairing old cast iron



Art. Nr.	0×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E660101S	2,5×350 mm	105	2,3	1	DFW
E660102S	3,2×350 mm	65	2,2	1	DFW

Art. Nr.	0×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E220125S	2,5×350 mm	5	0,100	1	DFW
E220126S	3,2×350 mm	5	0,170	1	DFW

#### **TECHNICAL DATA**



Standards:	ISO 1071: E C Ni-Cl 3 AWS A 5.15: ENi-Cl
Typical Weld Metal Composition (%):	C1,2 Si<2,0 Mn<1,0 Fe<2,0 Ni>95,0
All Weld Metal Mechanical Properties:	Rm >300 MPa Hardness ~180 HB
Electrode polarity:	Positive, Negative
Output Circuit Voltage (OCV):	40V

## HARDFACING ELECTRODES FOR MMA WELDING (SMAW)

#### **HARDFACING ELECTRODE - (DIROK RB 600)**



#### RUTILE ELECTRODE FOR HARDFACING.

Rutile-basic coated electrode for surfacing of machines and construction parts suffering from wear and tear, as well as of tools made of low-alloyed and cast steels. Resistant to medium abrasion, shock and pressure. Electrodes are easy to weld even on small welding equipment with low open arc voltage. Soft flow, almost no spatters, self releasing slag, nice aspect of the weld beads, crack free deposit, machinable by grinding.

## WELDABLE STEEL RANGE:

Low alloyed steels, high alloyed steels, wear plates.

### MAIN APPLICATIONS:

Hardfacing of moulds, scrapers, buckets and bucket teeth, excavator parts, chisels, conveyer screws, track links, cutting tools, crusher cones.

## **ADVANTAGES:**

- Universal all positions
- Good resistance to abrasion, shock and pressure
- Self releasing slag
- Machinable by grinding



Art. Nr.	0×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E600101S	3,2×450 mm	60	2,8	1	DFW
E600102S	4,0×450 mm	40	2,8	1	DFW

Art. Nr.	0×Long	Pcs/pack	Kg/pack	Packs/box	Stock class
E220115S	3,2×450 mm	22	1,0	1	DFW





Standards:	EN 14700: E Fe2
Typical Weld Metal Composition (%):	Fe (base) C1,0 Si0,5 Mn1,3 Cr4.5
Hardness:	~ 600 HB ; 55-60 HRC Obtained in pour weld metal, 2-3 layers
Electrode polarity:	Negative
Output Circuit Voltage (OCV):	~ 45V



## **CHOOSING THE PROPER STICK ELECTRODE**

 ${\sf GCE}\ offers\ a\ selection\ of\ the\ most\ used\ electrodes, suitable\ for\ most\ of\ the\ professional\ welding\ applications.$ 

Application Product		Feature
	ARC MAGIC S	Universal
Carbon Steel Welding	DIANETS	Enhanced mechanical characteristics
	DIANE BT	Special for repairing
Difficult weld Steel Welding	INOX 29.10R	Multipurpose, high security
Stainless Steel Welding	INOX RR316LC	Stainless steel 316L
Dissimilar Metals Welding	INOX 29.10R	Multipurpose, high security
Cast Iron Welding	FUN Nº1	Lamellar cast iron
Hardfacing	DIROK RB 600	Universal (55-60 HRC)



	Product Application		Classifica	tion
lee	ARC MAGIC S	Universal rutile	ISO 2560-A: E420RC11	AWS A5.1: E6013
Un-alloyed steel	DIANETS	Universal rutile with enhanced mechanical characteristic	ISO 2560-A: E420RC11	AWS A5.1: E6013
-'n	DIANE BT	Basic, special for repairing	ISO 2560-A: E382B12H10	AWS A5.1: E7016
High-alloyed steel	INOX RR316LC	Stainless steel 316L	ISO 3581-A: E19123LR32	AWS A5.4: E316L-16
High-a ste	INOX 29.10R	Multipurpose for high security repairs	ISO 3581-A: E299R32	AWS A5.4: E312-16
Cast	FUN Nº1	Cast iron welding and repairing	ISO 1071: ECNi-Cl3	AWS A5.15: ENi-Cl
Hardfa- cing	DIROK RB 600	Universal for hardfacing	EN 14700: EFe2	



## STAINLESS STEEL BASED ALLOYS FOR TIG WELDING (GTAW)

## **STAINLESS STEEL 308**



Filler alloy for TIG welding of stainless steels (304L, 304, 347, 321, etc).

#### **IDEAL FOR:**

Welding of piping systems, works of fine thickness equal or lower than 3 mm and for penetration passes. Suitable also for oxy-acetylene welding (not oxy-propane).

#### ISO 14343-A: W 199L

#### AWS A5.9: ER308L

Art. Nr.	Description	Long	0	Qt.	Stock class
B100302K	GAZINOX 308 L Si	1 m	1,2 mm	5 kg	MTO
B100303K	GAZINOX 308 L Si	1 m	1,6 mm	5 kg	DFW
B100304K	GAZINOX 308 L Si	1 m	2 mm	5 kg	MTO

#### **TECHNICAL DATA**

Chemical composition (%):	Fe (base) C=0,015 Cr=19,5 Ni=9,8 Si=0,42 Mn=1,8	
Mechanical properties:	Rm: 600 N/mm <sup>2</sup> Rp(0.2): 430 N/mm <sup>2</sup> A%: 38%	

## Gazinox use in TIG is without deoxidiser

## **STAINLESS STEEL 316**



Filler alloy for TIG welding of stabilised stainless steels (316, 316L, etc) or not stabilised. Service temperature from -120°C up to +400°C. Applied in the chemical and petrochemical industries, refineries, food industries.

#### **IDEAL FOR:**

ISO 14343-A: W 19 12 3 L

Welding of piping systems, works of fine thickness equal or lower than 3 mm and for penetration passes. Suitable also for oxy-acetylene welding (not oxy-propane).

GAZINOX 316 L Si 1 m

DIN 8556-86: X2 CrNiMo 19.12						
Art. Nr.	Description	Long	0	Qt.	Stock class	
B100402K	GAZINOX 316 L Si	1 m	1,2 mm	5 kg	DFW	
B100403K	GAZINOX 316 L Si	1 m	1,6 mm	5 kg	DFW	
B100404	GAZINOX 316 L Si	1 m	2 mm	5 kg	DFW	

2,5 mm

EN 12072-99: W 19 12 3 L

AWS A5.9:

5 kg

**ER316L** 

MTO

## **TECHNICAL DATA**

B100406K

Chemical composition (%):	Fe (base) C=0,02 Cr=18,6 Ni=12,4 Mo=2,8 Si=0,45 Mn=1,8				
Mechanical properties:	Rm: 650 N/mm <sup>2</sup> Rp(0.2): 450 N/mm <sup>2</sup> A%: 38%				

•	Gazinox use in TIG is without
	deoxidiser

For welding of stainless steel with oxy-gas use the Gazargent rods

For welding of stainless steel with oxy-gas use the Gazargent rods



## **ALUMINUM BASED ALLOYS FOR TIG WELDING (GTAW)**

## **ALUMINUM (AG5)**



Filler metal for TIG welding of aluminum alloys. Welding of all aluminum parts. Mg max: 5%. Piping, bodywork, maintenance, marine, rail, automotive.

ISO 18273: S Al 5356 (AlMg5Cr)

AWS A5.10: ER 5356

Art. Nr.	Description	Long	0	Rods/pack	Qt.	Stock class
B110401K	GAZALU AG5	1 m	1,6 mm	376	2 kg	DFW
B110403K	GAZALU AG5	1 m	2 mm	240	2 kg	DFW
B110408K	GAZALU AG5	1 m	2,4 mm	94	2 kg	DFW
B110404K	GAZALU AG5	1 m	3,2 mm	84	2 kg	DFW

#### TECHNICAL DATA

Chemical composition (%):	Al (base) - Si 0,05	- Fe 0,13 - Mn 0,15	- Mg 4,8 - Ti 0,13 - Cr 0,1 - others
Mechanical properties:	Rm: 290 N/mm <sup>2</sup>	Re: 120N/mm <sup>2</sup>	A%:30
Melting range:	560 - 630° C		

## **ALUMINUM (AS 12)**



Filler metal for autogenous welding or TIG welding of aluminium alloys. Welding of aluminium castings with Si>7%. High tensile strength and corrosion-proof. Low melting temperature.

## **IDEAL FOR:**

Aluminum welding OXY-ACETYLENE or TIG. Smooth melting without bubbling and slag.

ISO 18273: S AI 4047 (AISi12)

AWS A5.10: ER 4047

Art. Nr.	Description	Long	0	Qt.	Stock class
B110501K	GAZALU AS 12	1 m	2 mm	5 kg	DFW
B110503K	GAZALU AS 12	1 m	3,2 mm	5 kg	MTO

#### **TECHNICAL DATA**

Chemical composition (%):	Al (base) - Si 12,0	- Fe <0,5 - Cu 0,00	7 - Mn 0,05 - Mg 0,02 - Zn 0,03 - others
Mechanical properties:	Rm: 140 N/mm <sup>2</sup>	Re: 70N/mm <sup>2</sup>	A%:18
Melting range:	570 - 590° C		

## **FLUX POWDER (DEOXIDISER)**

Art. Nr.	Description	Pack	Qt.	Stock class
B140112	FLUX GAZALU*	200 g	1	DFW
	(for aluminium alloys AG5 an	nd AS12)		



## **IRON BASED ALLOYS FOR BRAZING**

## **COPPER COATED MILD STEEL**



Filler alloy for autogenous welding of mild steels. Autogenous welding of all pieces in soft steel. Piping, vehicle bodywork and maintenance. Also suitable for use by plumbers and boiler repairers.

#### **IDEAL FOR:**

Joining extra soft steels by oxy-acetylene welding (not oxy-propane). Soft melting without bubbling or slag. Copperplated steel doesn't rust, no mess, no bubbling during welding.

#### ISO 16120-2: C10D

Art. Nr.	Description	Long	0	Qt.	Stock class
B100201K	GAZOFER CU	1 m	1,5 mm	10 kg	DFW
B100202K	GAZOFER CU	1 m	2 mm	10 kg	DFW
B150340	GAZOFER CU	0,5 m	2 mm	1 kg	DFW
B100203K	GAZOFER CU	1 m	2,5 mm	10 kg	DFW
B100204K	GAZOFER CU	1 m	3 mm	10 kg	DFW
B150341	GAZOFER CU	0,5 m	3 mm	1 kg	DFW
B100205K	GAZOFER CU	1 m	4 mm	10 kg	DFW
B100206K	GAZOFER CU	1 m	5 mm	10 kg	DFW

#### **TECHNICAL DATA**

Chemical composition (%):	Fe (base) C=0,11 Mn=0,50 Si=0,30 P=0,035 S=0,035
Mechanical properties:	Rm: 600-1100 N/mm <sup>2</sup> depending on diameter
Melting range:	>1200° C

#### **USED WITHOUT WELDING POWDER**

## **BLACK ANNEALED IRON**



Offers excellent flexibility and softness thanks to the annealing process.

#### **IDEAL FOR**

Autogenous welding of common steels and iron (in the field of construction, agricultural, mechanical and general steelwork).

#### ISO 16120-2: C9D

Art. Nr.	Description	Long	0	Qt.	Stock class
MA10005	IRON	1 m	2,0 mm	10 kg	DFW
MA10010	IRON	1 m	3,0 mm	10 kg	DFW

Chemical composition (%):	Fe (base) C<0,10 Mn=0,50 Si<0,30 P=0,035 S=0,035
Mechanical properties:	Rm: 300-450 N/mm <sup>2</sup>
Melting range:	1425 - 1540° C



## **COPPER BASED ALLOYS FOR BRAZING**

## **BRASS WITH SILICON (FLUX COATED)**



For brazing ferrous metals and copper alloys. Brazing of alloys, steels, bronzes, galvanized metals. Pipe making, vehicle bodywork, maintenance, ironmongery, farming implements.

#### IDFAL FOR

Brass alloys. High quality resistant and malleable braze welds. Excellent fluidity with no evaporation of zinc on galvanized steels.

EN 1044 : CU	J302 DIN 8513:	L-CuZn39Sn	AWS A5-8:	RB CuZ	n-A
Art. Nr.	Description	Long	0	Qt.	Stock class
B130201	GAZOBRONZE COATED	1 m	1,5 mm	174	DFW
B130202	GAZOBRONZE COATED	1 m	2 mm	120	DFW
B130203	GAZOBRONZE COATED	1 m	2,5 mm	80	DFW
B130204	GAZOBRONZE COATED	1 m	3 mm	60	DFW
B130205	GAZOBRONZE COATED	1 m	4 mm	40	DFW
Art. Nr.	Description	Long	0	Qt.	Stock class
B150318	GAZOBRONZE COATED	0,5 m	2 mm	1 kg	DFW
B150319	GAZOBRONZE COATED	0,5 m	3 mm	1 kg	DFW

#### **TECHNICAL DATA**

Chemical composition (%):	Cu=59 Zn=39,8 Si=0,2 others	
Mechanical properties:	Rm: 450 N/mm <sup>2</sup> ; A%: 35	
Melting range:	870-890° C	

## **BRASS WITH SILICON (UNCOATED)**



For brazing ferrous metals and copper alloys. Brazing of alloys, steels, bronzes and galvanized metals. Pipe making, vehicle bodywork, maintenance, ironmongery, farming implements.

#### **IDEAL FOR**

 $Brass alloys. High \ quality, resistant \ and \ malleable \ braze \ welds. \ Excellent \ fluidity \ with \ noz inc \ evaporation \ on \ galvanized \ steel.$ 

EN 1044 : CU30	2 DIN 8513	: L-CuZn39Sn	AWS A5-8	RB CuZr	ı-A
Art. Nr.	Description	Long	0	Qt.	Stock class
B130101K	GAZOBRONZE UNCOATED	1 m	1,5 mm	10 kg	DFW
B130102K	GAZOBRONZE UNCOATED	1 m	2 mm	10 kg	DFW
B130103K	GAZOBRONZE UNCOATED	1 m	2,5 mm	10 kg	DFW
B130104K	GAZOBRONZE UNCOATED	1 m	3 mm	10 kg	DFW
B130105K	GAZOBRONZE UNCOATED	1 m	4 mm	10 kg	MTO

### TECHNICAL DATA

Chemical composition (%):	Cu=59 Zn=39,8 Si=0,2 others
Mechanical properties:	Rm: 450 N/mm <sup>2</sup> ; A%: 35
Melting range:	870-890° C

To be used with GAZOBRONZE powder deoxidiser B140106.

## **FLUX POWDER (DEOXIDISER)**



Art. Nr.	Description	Pack	Qt.	Stock class
B140106	GAZOBRONZE POWDER	250 g	1	DFW



## **COPPER BASED ALLOYS FOR BRAZING**

## **BRASS WITH NICKEL (FLUX COATED)**



For welding ferrous metals and copper alloys put under a lot of stress. Braze welding of alloys, steels, bronzes, galvanized metals, nickel. Manufacturing of or repairs to tools, tubular structures – wherever the welding is put to the test.

#### IDFAL FOR

Brass alloys with high nickel content. Strong mechanical resistance. Flows very Lissely. Extremely flexible coating (difficult to crumble even when you bend the rod).

EN 1044 : CU305 DIN 8513 : L-CuNi10Zn AWS A5-8: RBCuZn-D ISO 3677 : B-Cu49ZnNi(Si)-890/920

Art. Nr.	Description	Long	0	Qt.	Stock class
B150322	GAZOBRONZE NI COATED	1 m	2 mm	1 kg	DFW
B150323	GAZOBRONZE NI COATED	1 m	3 mm	1 kg	MTO

## **TECHNICAL DATA**

Chemical composition (%):	Cu=48 Zn=41,6 Ni=10,0 others=0,4
Mechanical properties:	Rm: 750 N/mm <sup>2</sup> ; A%: 25
Melting range:	890-920° C

Coated alloy that does not require a deoxidizer. If desired, the GAZOBRONZE B140106 (250g) deoxidizer in powder form can be added.





#### **COPPER-PHOSPHORUS**



Phosphor-copper alloy for brazing copper alloys. Assembly of copper pipes and tubing through capillary actionheating, sanitary fittings.

#### **CAPILLARY-ACTION BRAZING:**

Flows very smoothly. Copper and phosphor alloy with low fusion point for brazing copper without using pickling products. Reserved exclusively for brazing copper and copper alloys. To be used with an oxyacetylene or oxy-propane welding torch with neutral flame adjustment.

ISO 17672 : CuP 180 EN 1044 : CP 202 DIN 8513 : L-CuP7

AWS A5-8: BCuP-2 ISO 3677: B-Cu93P 710-825

Art. Nr.	Description	Long.	Ø	Qt.	Stock class
B130408	GAZPHOS 01	0,5 m	2 mm	500 g	DFW
B130405	GAZPHOS 01	0,5 m	2 mm	1 kg	DFW

#### TECHNICAL DATA

Chemical composition (%):	Cu=93 P=7
Mechanical properties:	Rm: 500 N/mm <sup>2</sup> ; A%: 4
Melting range:	710-820° C

ON COPPER THE ALLOY IS SELF-PICKLING. FOR BRAZING ON BRASS OR BRONZE USE THE PICKLING PRODUCT FLUXOBRAZ ATG, ART. NR. B140110 (150G).

#### **COPPER-PHOSPHORUS WITH SILVER 2%**



Phosphor-copper alloy with 2% silver for brazing copper alloys. Assembly of copper pipes and tubing through capillary action. Heating, sanitary fittings. Refrigeration industry.

#### **CAPILLARY-ACTION BRAZING:**

Flows very smoothly (thanks in part to the silver). Low fusion point copper and phosphor alloy for brazing copper without pickling products. Reserved exclusively for brazing copper and copper alloys. To be used with an oxy-acetylene or oxy-propane welding torch with neutral flame adjustment.

ISO 17672 : CuP 279 EN 1044 : CP105 DIN 8513 : L-Ag2P

AWS A5-8: BCuP-6 ISO 3677: B-Cu91PAg 650-820

Art. Nr.	Description	Long.	Ø	Qt.	Stock class
B130801	GAZPHOS 2	0,5 m	2 mm	1 kg	DFW
B130802	GAZPHOS 2	0,5 m	2 mm	500 g	DFW

#### **TECHNICAL DATA**

Chemical composition (%):	Cu=91 P=7 Ag=2
Mechanical properties:	Rm: 550 N/mm <sup>2</sup> ; A%: 6
Melting range:	650-820° C

ON COPPER THE ALLOY IS SELF-PICKLING. FOR BRAZING ON BRASS OR BRONZE USE THE PICKLING PRODUCT FLUXOBRAZ ATG, ART. NR. B140110 (150G).

#### **FLUX PASTE (DEOXIDISER)**



FLUXOBRAZ ATG (certified by gas company ATG FR) can be utilized as deoxidizer also for silver alloys.

Art. Nr.	Description	Pack	Qt.	Stock class
B140110	FLUXOBRAZ ATG	150 g	1	DFW



## COPPER-PHOSPHORUS BASED ALLOYS FOR BRAZING

#### **COPPER-PHOSPHORUS WITH SILVER 5%**



Copper-phosphor alloy with 5% silver for brazing copper alloys. assembly of copper pipes and tubing through capillary action. Heating, sanitary fittings. Refrigeration industry.

#### **CAPILLARY-ACTION BRAZING:**

Flows very smoothly (thanks in part to the silver). Low fusion point copper and phosphor alloy for brazing copper without pickling products. Reserved exclusively for brazing copper and copper alloys. To be used with an oxy-acetylene or oxy-propane welding torch with neutral flame adjustment.

ISO 17672: CuP 281 EN 1044: CP104 DIN 8513: L-Ag5P

AWS A5-8: BCuP-3 ISO 3677: B-Cu89PAg 650-810

Art. Nr.	Description	Long.	Ø	Qt.	Stock class
B130502	GAZPHOS 5	0,5 m	2 mm	250 g	DFW

#### **TECHNICAL DATA**

Chemical composition (%):	Cu=89 P=6 Ag=5
Mechanical properties:	Rm: 650 N/mm <sup>2</sup> ; A%: 8
Melting range:	650-810° C

ON COPPER THE ALLOY IS SELF-PICKLING. FOR BRAZING ON BRASS OR BRONZE USE THE PICKLING PRODUCT FLUXOBRAZ ATG, ART. NR. B140110 (150G).

#### **COPPER-PHOSPHORUS WITH SILVER 6% ATG APPROVED**



Copper-phosphor alloy with 6% silver for capillary-action HIGH TEMPERATURE brazing of copper piping. FRENCH MINISTRY OF INDUSTRY (ATG) APPROVED. Assembly of copper pipes and tubing through capillary action, e.g. combustible gas piping (except acetylene). All pieces in copper, brass and bronze. Capillary-action brazing for securing pipes and connectors: Flows very smoothly (thanks in part to the silver). Low fusion point copper and phosphor alloy for brazing copper without pickling products. Reserved exclusively for brazing copper and copper alloys. To be used with an oxy-acetylene or oxy-propane welding torch with neutral flame adjustment.

ISO 17672: close to CuP 283a NF A 81-362 (12/2010): CuP291 EN 1044: CP103

DIN 8513 : L-Ag6PNi ISO 3677 : B-Cu87PAg(Ni)-645/725

#### ATG APPROVED

Art. Nr.	Description	Long.	Ø	Qt.	Stock class
B131003	GAZPHOS 6 B ATG	0,5 m	2 mm	1 kg	DFW
B131004	GAZPHOS 6 B ATG	0,5 m	2 mm	500 g	DFW
B131005	GAZPHOS 6 B ATG	0,5 m	2 mm	250 g	DFW

#### TECHNICAL DATA

Chemical composition (%):	Cu=86,6 P=7,3 Ag=6,0 Ni=0,1
Mechanical properties:	Rm: 650 N/mm <sup>2</sup> ; A%: 8
Melting range:	645-725°C

USE THE PICKLING POWDER FLUXOBRAZ ATG, ART. NR. B140110 (150G).

#### **FLUX PASTE (DEOXIDISER)**





 ${\sf FLUXOBRAZ\,ATG\,(certified\,by\,gas\,company\,ATG\,FR)\,can\,be\,utilized\,as\,deoxidizer\,also\,for\,silver\,alloys.}$ 

Art. Nr.	Description	Pack	Qt.	Stock class
B140110	FLUXOBRAZ ATG	150 g	1	DFW



## **COPPER-PHOSPHORUS BASED ALLOYS FOR BRAZING**

#### **COPPER-PHOSPHORUS WITH SILVER 15%**



Copper-phosphor alloy with 15% silver for welding copper alloys. Assembly of copper pipes and tubing through capillary action. Heating, sanitary fittings. Refrigeration industry.

Particularly suitable for electrical connections.

#### **CAPILLARY-ACTION BRAZING:**

Flows very smoothly (thanks to the silver). Ternary copper-silver-phosphor alloy w ith low fusion point for brazing copper without pickling products. Reserved exclusively for brazing copper and copper alloys. GAZOPHOS 15 is to be used with an oxy-acetylene or oxy-propane welding torch with neutral flame adjustment.

ISO 17672: CuP 284 EN 1044: CP102 DIN 8513: L-Ag15P

AWS A5-8: BCuP-5 ISO 3677: B-Cu80AgP 650-800

Art. Nr.	Description	Long	Ø	Qt.	Stock class
B130901	GAZPHOS 15	0,5 m	2 mm	1 kg	MTO
B130902	GAZPHOS 15	0.5 m	2 mm	250 a	MTO

#### **TECHNICAL DATA**

Chemical composition (%): Cu=80,0 P=5,0 Ag=15,0

Mechanical properties: Rm: 650 N/mm²; A%: 10

Melting range: 650-800°C

On copper the alloy is self-pickling. For brazing on brass or bronze use the pickling product FLUXOBRAZ ATG, Art. Nr. B140110 (150g).

## **FLUX PASTE (DEOXIDISER)**



FLUXOBRAZ ATG (certified by gas company ATG FR) can be utilized as deoxidizer also for silver alloys.

Art. Nr.	Description	Pack	Qt.	Stock class
B140110	FLUXOBRAZ ATG	150 g	1	DFW



## SILVER BASED ALLOYS (CADMIUM FREE) FOR BRAZING

#### **SILVER 20% (FLUX COATED)**



Alloy with high silver content (20%) for assembly of steel/brass/copper pieces. assembling badly made pieces. Low-temperature brazing in general.

#### **CAPILLARY-ACTION BRAZING:**

Flows very smoothly (thanks to the silver). Copper-silver-zinc alloy with low fusion point for brazing copper and copper alloys, steels and stainless steels. Extremely flexible coating (it does not crumble when you bend the rod). GAZARGENT 20 is to be used with an oxy-acetylene, oxy-propane or oxy-butane welding torch with neutral flame adjustment. **CADMIUM FREE.** 

ISO 3677: B-Cu46ZnAgSi-690/810	EN 1044: close to AG206	DIN 8513: L-Ag20
--------------------------------	-------------------------	------------------

#### **REDUCED COATING**

Art. Nr.	Descr.	Long	Ø	Flux ratio	Rods/pack	Weight	Stock class
B130905	GAZARGENT 20 COATED	0,5 m	2 mm	26%	14	250 g	DFW
STANDARD COATING Art. Nr.	Descr.	Long	ø	Flux ratio	Rods/pack	Weight	Stock class
B130950	GAZARGENT 20 COATED	0.5 m	2 mm	40%	45	1 ka	DFW

#### **TECHNICAL DATA**

Chemical Composition (%):	Ag20 Cu46 Zn33,8 Si0,2
Mechanical properties:	Rm: 400 N/mm <sup>2</sup> A%: 20
Melting range:	690-810℃

## **SILVER 30% (FLUX COATED)**



Alloy with high silver content (30%) for assembly of steel/brass/copper. Wide joints in piping, plumbing, climate control and exchangers. Brazing generally at low temperatures.

#### **CAPILLARY-ACTION BRAZING:**

Flows very smoothly (thanks to the silver). copper-silver-zinc alloy with low fusion point for brazing copper and copper alloys, steels and stainless steels. Extremely flexible coating (it does not crumble when you bend the rod). GAZARGENT 30 is to be used with an oxy-acetylene, oxy-propane or oxy-butane welding torch with neutral flame adjustment. **CADMIUM FREE.** 

#### ISO 17672: Ag 130

ISO 3677: B-Cu36ZnAgSn-665/755	EN 1044: AG107	DIN 8513: L-Ag30Sn

### REDUCED COATING

Art. Nr.	Descr.	Long	•-	lux atio	Rods/pack	Weight	Stock class
B130607	GAZARGENT 30 COATED	0,5 m	2 mm 2	26%	14	250 g	DFW

Chemical Composition (%):	Ag30 Cu36 Zn32 Sn2
Mechanical properties:	Rm: 500 N/mm <sup>2</sup> A%: 18
Melting range:	665-755°C



## SILVER BASED ALLOYS (CADMIUM FREE) FOR BRAZING

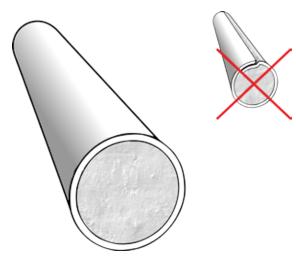
## SILVER 34% (TUBULAR FLUX CORED) - TBW BRAZARGENT 5034



## WITHOUT SEAM !!!

## **PRODUCT ADVANTAGES:**

- Protection of operators (no contact with the flux)
- Absence of residues after operation (no binder in the flux)
- Adapted to any gap: perfect penetration and impermeability (depending on the alloy)
- Innovative product, unique concept worldwide
- · High fluidity and excellent capillarity
- Strong reduction of fumes emissions during application
- Excellent control of deposit of flux and metal
- Optimisation of post-braze cleaning (perfection of process)
- · Excellent flux/metal ratio: increased profitability
- Use in flame, induction or oven/furnace brazing
- Assembly of all kind of metals (steel, copper, stainless steel, brass...)
- Less heat required in comparing to solid wire (less mass)
- Ease of storage and transport thanks to the absence of flux coating



ISO 3677: B-Cu36AgZnSn-630/730		EN 1	044: AG	5106		DIN 8513: L-Ag34Sn			
	_				_				

Art. Nr.	Descr.	Long	•-	Flux ratio	Rods/pack	Weight	Stock class
B130651	GAZARGENT 34 CORED	0,5 m	1,6 mm	12%	15 rods	100 g	MTO
	TUBULAR						

Chemical Composition (%):	Ag34 Cu36 Zn27 Sn3
Mechanical properties:	Rm: 500 N/mm <sup>2</sup> A%: 20
Melting range:	630-730°C



## SILVER BASED ALLOYS (CADMIUM FREE) FOR BRAZING

#### **SILVER 34% (UNCOATED) - ATG APPROVED**



UNCOATED ALLOY WITH 34% SILVER, FRENCH MINISTRY OF INDUSTRY (ATG) approved. Alloy for universal use. Brazing, generally at low temperatures, of copper, copper alloys and all kinds of steel, including stainless. Water/gas pipes. Climate control systems. Conforms to French government specifications ATG B521 & B524.

#### **CAPILLARY-ACTION BRAZING:**

Very fluid and elastic (thanks to the silver). Copper-silver-zinc alloy with low fusion point for brazing copper and copper alloys, steels and stainless steels. Excellent capillary attraction even on pieces with very small Description. GAZARGENT 34 is to be used with an oxy-acetylene, oxy-propane or oxy-butane welding torch with neutral flame adjustment. **CADMIUM FREE.** 

ISO 17672: Ag 134

ISO 3677: B-Cu36AgZnSn - 630/730 EN 1044: AG106 DIN 8513: L-Ag34Sn

#### ATG APPROVED

Art. Nr.	Descr.	Long	Ø	Rods/pack	Weight S	tock class
B130640	GAZARGENT SC 34B ATG UNCOATED	0,5 m	2 mm		100 g	DFW
B130641	GAZARGENT SC 34B ATG UNCOATED	0,5 m	2 mm		250 g	DFW

#### **TECHNICAL DATA**

Chemical Composition (%):	Ag34 Cu36 Zn27 Sn3
Mechanical properties:	Rm: 500 N/mm <sup>2</sup> A%: 20
Melting range:	630-730°C

Utilize in combination with deoxidizer powder FLOXOBRAZ ATG cod B140110 (150g).

#### **FLUX PASTE (DEOXIDISER)**





FLUXOBRAZ ATG (certified by gas company ATG FR) can be utilized as deoxidizer also for silver alloys.

Art. Nr.	Description	Pack	Qt. Stock class
B140110	FLUXOBRAZ ATG	150 g	1 DFW

## **SILVER 40% (FLUX COATED)**



COATED ALLOY WITH 40% SILVER. Alloy for universal use. Brazing, generally at low temperatures, of copper, copper alloys and all kinds of steel, including stainless. Water/gas pipes. Climate control systems.

#### **CAPILLARY-ACTION BRAZING:**

Very fluid and elastic (thanks to the silver). Copper-silver-zinc alloy with low fusion point for brazing copper and copper alloys, steels and stainless steels. Excellent capillary attraction.

GAZARGENT 40 is to be used with an oxy-acetylene, oxy-propane or oxy-butane welding torch with neutral flame adjustment. **CADMIUM FREE.** 

ISO 17672: Ag 140 AWS A5.8: BAg-28 ISO 3677: B-Ag40CuZnSn-650/710 EN 1044: AG105 DIN 8513: L-Ag40Sn

#### REDUCED COATING

Art. Nr.	Descr.	Long	Ø	Flux ratio	Rods/pack	Weight	Stock class
MA40020	GAZARGENT 40 COATED	0,5 m	1,5 mm	30%	90	1 kg	DFW
B130609	GAZARGENT 40 COATED	0,5 m	2 mm	24%	60	1 kg	DFW
B130611	GAZARGENT 40 COATED	0,5 m	2 mm	24%	15	250 g	DFW
B130612	GAZARGENT 40 COATED	0,5 m	2 mm	24%	6	100 g	DFW

#### STANDARD COATING

Art. Nr.	Descr.	Long	Ø	Flux ratio	Rods/pack	Weight	Stock class
B130620	GAZARGENT 40 COATED	0,5 m	2 mm	40%	45	1 kg	MTO

Chemical Composition (%):	Ag40 Cu30 Zn28 Sn2
Mechanical properties:	Rm: 500 N/mm <sup>2</sup> A%: 17
Melting range:	650-710°C



DIN 8513: L-Ag40Sn

1 kg

MTO

80

## SILVER BASED ALLOYS (CADMIUM FREE) FOR BRAZING

#### **SILVER 40% (UNCOATED)**



UNCOATED ALLOY WITH 40% SILVER. Alloy for universal use. Brazing, generally at low temperatures, of copper, copper alloys and all kinds of steel, including stainless. Water/gas pipes. Climate control systems.

#### CAPILLARY-ACTION BRAZING:

Very fluid and elastic (thanks to the silver). Copper-silver-zinc alloy with low fusion point for brazing copper and copper alloys, steels and stainless steels. Excellent capillary attraction.

GAZARGENT 40 is to be used with an oxy-acetylene, oxy-propane or oxy-butane welding torch with neutral flame adjustment. **CADMIUM FREE.** Suitable for food grade.

ISO 17672: Ag 140 AWS A5.8: BAg-28 ISO 3677: B-Ag40CuZnSn-650/710 EN 1044: AG105

GAZARGENT 40 UNCOATED 0,5 m

Art. Nr. Long Rods/pack Weight Stock class B130703 GAZARGENT 40 UNCOATED 0,5 m 1,5 mm 250 g DFW 32 B150325 GAZARGENT 40 UNCOATED 0,5 m 8 100 g DFW 2 mm B150326 GAZARGENT 40 UNCOATED 0,5 m 2 mm 20 250 g DFW

2 mm

#### TECHNICAL DATA

B130702

Chemical Composition (%):

Mechanical properties:

Rm: 500 N/mm² A%: 17

Melting range:

650-710°C

Utilize in combination with deoxidizer powder GAZARGENT 750 ref B140115.

#### **FLUX (DEOXIDISER)**





Art. Nr.	Description	Pack	Qt.	Stock class
B140115	GAZARGENT 750 (powder)	80 g	1	DFW
B140110	FLUXOBRAZ ATG (paste)	150 g	1	DFW

### **SILVER 55% (FLUX COATED)**



COATED ALLOY WITH 55% SILVER. Alloy with very high silver content for assembly of stainless steel/brass/copper. Especially suitable for medical gases, purified gases and in the food industry. Alloy for universal use. Brazing, generally at low temperatures, of copper, copper alloys and all kinds of steel, including stainless. Narrow joints on stainless steel. Pipes for water/gas and for purified gases or gases destined for food production. Climate control, sanitary fittings.

#### **CAPILLARY-ACTION BRAZING:**

Very fluid and elastic (thanks to the silver). Ternary copper-silver-zinc alloy with low fusion point and low fusion interval for brazing copper and copper alloys, steels and stainless steels. Excellent capillary attraction. GAZARGENT 2011 is to be used with an oxy-acetylene, oxy-propane or oxy-butane welding torch with neutral flame adjustment. **CADMIUM-FREE.** 

ISO 17672: Ag 155

ISO 3677: B-Ag55ZnCuSn-630/660 EN 1044: AG103 DIN 8513: L-Ag55Sn

#### SUITABLE FOR FOODS

Art. Nr.	Descr.	Long	Ø	Flux ratio	Rods/pack	Weight	Stock class
B130721	GAZARGENT 55 COATED	0,5 m	1,5 mm	30%	45	500 g	DFW
B130719	GAZARGENT 55 COATED	0,5 m	2 mm	24%	27	500 g	DFW

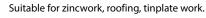
Chemical Composition (%):	Ag55 Cu21 Zn22 Sn2
Mechanical properties:	Rm: 510 N/mm <sup>2</sup> A%: 11
Melting range:	630-660°C



## TIN BASED ALLOYS WITH LEAD FOR BRAZING

## **TIN 33% - Sn33Pb67 (WITH LEAD)**

arm en-300 sum to- the strap se-con



#### **SOLID RODS**



<sup>\*</sup> To be used in combination with Flux Gazetin Plus

#### **STRIPS**

Art. Nr.	Description	Pcs/pack	Qt.	Stock class
B135206K	GAZETAIN B33 Strip	2	1,5 kg	ATO

 $<sup>\</sup>ensuremath{^{*}}\xspace$  To be used in combination with Flux Gazetin Plus

#### **TECHNICAL DATA**

Chemical composition (%):	Sn=33 Pb=67
Melting range:	183-243°C

## **TIN 40% - Sn40Pb60 (WITH LEAD)**

Suitable for zincwork, heating systems. Paste allows more precise joining of parts.

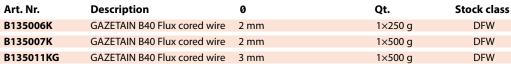
ISO 9453 : S-Pb60Sn40 (114)

#### **SOLID RODS**

Art. Nr.	Description	Pcs/pack	Qt.	Stock class
B135203K	GAZETAIN B40 Rod	5	1 kg	ATO

<sup>\*</sup> To be used in combination with Flux Gazetin Plus

## FLUX CORED WIRE



<sup>\*</sup> Self fluxing alloy. The Flux Gazetin Plus may be used for additional fluxing.

Chemical composition (%):	Sn=40 Pb=60
Melting range:	183-235℃



B135007K

<sup>1</sup> strip = 0,8 kg



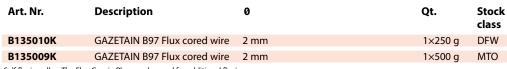
## TIN BASED ALLOYS LEAD FREE FOR BRAZING

## TIN 97% WITH COPPER (LEAD FREE) - Sn97Cu3



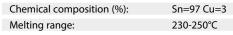
Suitable for plumbing, automotive, electrical and joining of many electronic components. ISO 9453 : S-Sn97Cu3 (402)

#### **FLUX CORED WIRE**



Self fluxing alloy. The Flux Gazein Plus may be used for additional fluxing.

#### **TECHNICAL DATA**







Lead free alloy may be used in plumbing installations, particularly where soft water is in use. It is widely used in food handling equipment where lead contamination must be avoided.

ISO 9453 : S-Sn96Ag4 (703)

### **SOLID WIRE**

Art. Nr.	Description	0	Qt.	Stock class
B135110K	GAZETAIN B96 Solid wire	2 mm	1×250 g	DFW

<sup>\*</sup> To be used in combination with Flux Gazetin Plus

### TECHNICAL DATA

Chemical composition (%):	Sn=96,5 Ag=3,5
Melting range:	221°C

## **FLUX GAZETAIN PLUS (CREAM)**

Pickling paste suitable for both tin alloys with lead and lead free.

 $Soldering\ of\ iron-copper,\ zinc\ and\ lead\ alloys,\ piping\ in\ copper,\ plumbing,\ electrical\ materials,\ space\ industry.$ 

Art. Nr.	Description	Qt.	Stock class
B140104	FLUX GAZETAIN PLUS (cream)	1×100 g	DFW

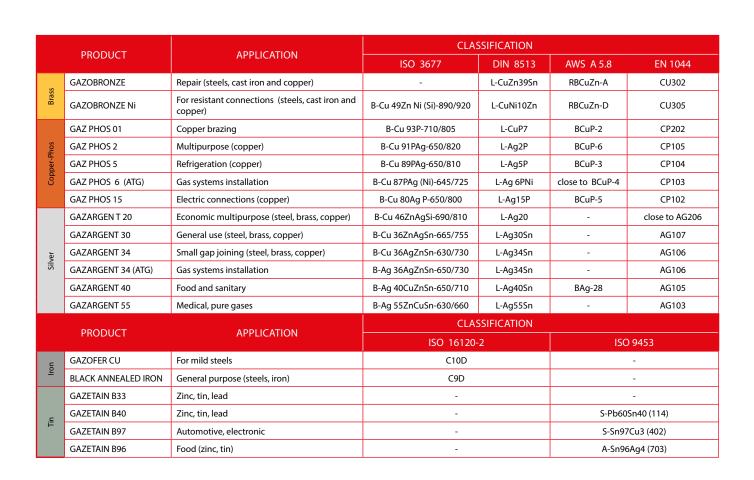


## TABLE OF USE OF FILLER METALS FOR BRAZING

LEAD

Gazetain

	LEAD	ZINC	ALUMINIUM	NICKEL	CAST IRON	STAINLESS STEEL	GALVANIZED STEEL	IRON/STEEL	BRASS	COPPER
COPPER	Gazetain	Gazetain	-	Gazargent	Gazargent Gazobronze	Gazargent	Gazobronze Gazargent	Gazobronze Gazargent Gazetainw	Gazobronze Gazphos Gazargent Gazetain	Gazphos Gazobronze Gazargent Gazetain
BRASS	Gazetain	Gazetain	-	Gazargent	Gazargent	Gazargent	Gazargent	Gazargent Gazetain	Gazobronze Gazargent Gazetain	
IRON/STEEL	Gazetain	Gazetain	-	Gazargent	Gazargent Gazobronze Gazobronze Ni	Gazargent	Gazobronze Gazargent	Gazofer Gazobronze Gazobronze Ni Gazargent Gazetain		
GALVANIZED STEEL	Gazetain	Gazetain	-	Gazargent	Gazobronze Gazargent	Gazargent	Gazobronze Gazargent			
STAINLESS STEEL	Gazetain	Gazetain	-	Gazargent	Gazargent	Gazargent				
CAST IRON	-	-	-	Gazargent	Gazobronze Gazargent				EED HELP 1	
NICKEL	-	-	-	Gazargent				IHEI	RIGHT FILLI	EK METAL!
ALUMINIUM	-	-	Gazalu							ecce
ZINC	Gazetain	Gazetain		-					H	Help



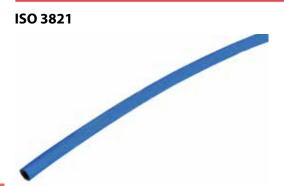








## SINGLE HOSE OXYGEN (BLUE) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)



Rubber hose for use with Oxygen in cutting and welding and allied processes. Not suitable for LPG, MPS and CNG.

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue synthetic rubber resistant to abrasion and weather
- Smooth surface

#### TECHNICAL DATA

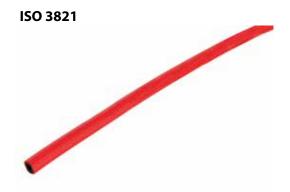
Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821

# WORKING PRESSURE 20 bar

Art. Nr.	Ø int × Ø ext	Coil	Stock class
RH001000-050	4×11 mm	50 m	DFW
272063035204	6,3×12,3 mm	20 m	DFW
272063035404	6,3×12,3 mm	40 m	DFW
RH004000-050	6,3×13,3 mm	50 m	DFW
RH005000-050	6,3×16,3 mm	50 m	DFW
RH006000-050	8×15 mm	50 m	DFW
RH007000-050	9×16 mm	50 m	DFW
272100035200	10×17 mm	20 m	DFW
272100035400	10×17 mm	40 m	DFW
RH008000-050	10×17 mm	50 m	DFW

<sup>\*</sup> The full length may be a combination of max two short lengths.

## SINGLE HOSE ACETYLENE (RED) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)



Rubber hose for use with Acetylene in cutting and welding and allied processes. Not suitable for LPG, MPS and CNG.

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Red synthetic rubber resistant to abrasion and weather
- Smooth surface

#### TECHNICAL DATA

Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821

## WORKING PRESSURE 20 bar

Art. Nr.	Ø int × Ø ext	Coil	Stock class
RH011000-050	4×11 mm	50 m	DFW
272063035205	6,3×12,3 mm	20 m	DFW
272063035405	6,3×12,3 mm	40 m	DFW
RH014000-050	6,3×13,3 mm	50 m	DFW
RH016000-050	8×15 mm	50 m	DFW
RH017000-050	9×16 mm	50 m	DFW
272100035201	10×17 mm	20 m	DFW
272100035401	10×17 mm	40 m	DFW
RH018000-050	10×17 mm	50 m	DFW

 $<sup>\</sup>mbox{\ensuremath{^{\ast}}}$  The full length may be a combination of max two short lengths.



## SINGLE HOSE ARGON (BLACK) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)



Rubber hose for use with Argon in cutting and welding and allied processes. Suitable also for hydrogen,  ${\rm CO_2}$ , Nitrogen for welding and cutting. Not suitable for LPG, MPS and CNG.

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Black synthetic rubber resistant to abrasion and weather
- Smooth surface

#### TECHNICAL DATA

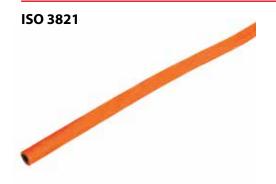
Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821

## WORKING PRESSURE 20 bar

Art. Nr.	Ø int × Ø ext	Coil	Stock class
272140612040	6×12 mm	40 m	DFW

<sup>\*</sup> The full length may be a combination of max two short lengths.

## SINGLE HOSE PROPANE/BUTANE (ORANGE) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)



Rubber hose for use with Propane/Butane in cutting and welding and allied processes. Suitable for Liquid Petroleum Gas (LPG), Methylacetylene-propadiene (MPS) gas, Compressed Natural Gas (CNG).

- Inner tube: Synthetic rubber resistant to LPG and Propane/Butane gases
- Reinforcement: High tensile synthetic textile
- External cover: Orange synthetic rubber resistant to abrasion and weather
- Smooth surface

#### **TECHNICAL DATA**

Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821

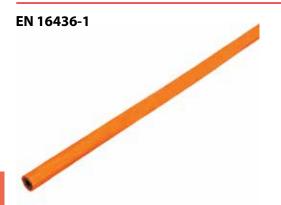
# WORKING PRESSURE 20 bar

Art. Nr.	Ø int × Ø ext	Coil	Stock class
272321009131	4×11 mm	50 m	DFW
272063035206	6,3×13,3 mm	20 m	DFW
272321063035	6,3×13,3 mm	50 m	DFW
272080035203	8×15 mm	20 m	DFW
272321009136	8×15 mm	50 m	DFW
272321035090	9 ×16 mm	50 m	DFW
272100035202	10×17 mm	20 m	DFW
272100035402	10×17 mm	40 m	DFW
272321311006	10×17 mm	50 m	DFW

<sup>\*</sup> The full length may be a combination of max two short lengths.



## SINGLE HOSE PROPANE/BUTANE (ORANGE) EN 16436-1



Rubber hose for transport od Propane, Butane. Suitable for Liquid Petroleum Gas (LPG), Methylacetylene-propadiene (MPS) gas, Compressed Natural Gas (CNG)

- Inner tube: Synthetic rubber resistant to LPG and Peropane/Butane gases
- Reinforcement: High tensile synthetic textile
- External cover: Orange synthetic rubber resistant to abrasion and weather
- Smooth surface

#### TECHNICAL DATA

Temperature:	-30°C / +70°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	30 bar
Bursting pressure:	75 bar
Standards:	EN 16436-1

# WORKING PRESSURE 30 bar

Art. Nr.	$\emptyset$ int $\times$ $\emptyset$ ext	Coil	Stock class
272030035004	4×12 mm	50 m	DFW
272030005063	6,3×16,3 mm	50 m	DFW

<sup>\*</sup> The full length may be a combination of max two short lengths.

#### **HOSE CLIPS**



#### HOSE CLIPS ONE EAR WITH INSERT

Stainless steel clip with one ear and insert ideal for mounting and to protect the hose from pinches and damages. Ensure uniform compression.

Art. Nr.	Descr.	Material	Hoses	Corrosion	Qt.	Stock class
WP24020	Clip 13 mm 1-EAR	Stainless steel	13-14 mm	> 800h	20	DFW
WP24022	Clip 15 mm 1-EAR	Stainless steel	15-16 mm	> 800h	20	DFW



## HOSE CLIPS DOUBLE EAR

Zinc plated steel clip with 2 ears. The 2 ears provide greater adjustability.

Art. Nr.	Descr.	Material	Hoses	Corrosion	Qt.	Stock class
90330	Clip 13-15 mm 2-EARS	Zinc plated steel	13-14 mm	> 96h	20	DFW
90340	Clip 15-18 mm 2-EARS	Zinc plated steel	15-16 mm	> 96h	20	DFW



#### **HOSE CLIPS WITH SCREW**

Stainless steel clip with clamping system in zinc plated steel. Useful to clamp a wide range of hoses with a single size. Width is  $9\times0.6$  mm.

Art. Nr.	Descr.	Material	Hoses	Qt.	Stock class
C10000046	Clip SCREW	Stainless steel	8-12 mm	20	DFW
C10000047	Clip SCREW	Stainless steel	10-16 mm	20	DFW
WP90352	Clip SCREW	Stainless steel	12-20 mm	20	DFW

Qt.

Stock class DFW

## **PLIERS FOR HOSE CLIP**

Pliers with not sharp jaws to tighten the clips. No damage for both clip and hose.





## TWIN HOSE OXYGEN/ACETYLENE (BLUE/RED) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)



Rubber twin hose for use with Oxygen/Acetylene cutting and welding and allied processes.

Not suitable for LPG, MPS and CNG

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue/red synthetic rubber resistant to abrasion and weather

#### TECHNICAL DATA

Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821

# WORKING PRESSURE 20 bar

	ОХҮ	ACE		
Art. Nr.	Ø int × Ø ext	Ø int × Ø ext	Coil	Stock class
272333044030	4×11 mm	4×11 mm	25 m	DFW
272333044004	4×11 mm	4×11 mm	40 m	DFW
272333166025	6,3×13,3 mm	6,3×13,3 mm	25 m	DFW
272333066617	6,3×13,3 mm	6,3×13,3 mm	40 m	DFW
272333066100	6,3×13,3 mm	6,3×13,3 mm	100 m	DFW
272333086010	6,3×13,3 mm	8,0×15,0 mm	25 m	DFW
272333068022	6,3×13,3 mm	8,0×15,0 mm	40 m	DFW
272333169025	6,3×13,3 mm	9,0×16,0 mm	25 m	DFW
272333069070	6,3×16,3 mm	9,0×16,0 mm	25 m	DFW
272333088050	8×15 mm	8×15 mm	25 m	DFW
272333088100	8×15 mm	8×15 mm	100 m	DFW
272312727025	10×17 mm	10×17 mm	25 m	DFW
272333110081	10×17 mm	10×17 mm	40 m	DFW

<sup>\*</sup> The full length may be a combination of max two short lengths.

#### TWIN HOSE OXYGEN/PROPANE (BLUE/ORANGE) ISO 3821 (FOR WELDING AND ALLIED PROCESSES)



Rubber twin hose for use with Oxygen/Propane cutting and welding and allied processes

Suitable for Liquid Petroleum Gas (LPG), Methylacetylene-propadiene (MPS) gas, Compressed Natural Gas (CNG)

- Inner tube OXY: Synthetic rubber resistant to the welding gases
- Inner tube PROP: Synthetic rubber resistant to LPG and Propane/Butane gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue/orange synthetic rubber resistant to abrasion and weather

### **TECHNICAL DATA**

Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821

# WORKING PRESSURE 20 bar

	OXY	PROP		
Art. Nr.	Ø int × Ø ext	Ø int × Ø ext	Coil	Stock class
272333030609	6.3×16.3 mm	9.0×16.0 mm	50 m	DFW

<sup>\*</sup> The full length may be a combination of max two short lengths.



## SINGLE HOSE OXYGEN (BLUE) ISO 3821 WITH FITTINGS AND NON RETURN VALVE (FOR WELDING AND ALLIED PROCESSES)



Rubber hose for use with Oxygen in cutting and welding and allied processes. Not suitable for LPG, MPS and CNG

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue synthetic rubber resistant to abrasion and weather
- NON RETURN VALVE in the outlet

#### **TECHNICAL DATA**

Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821(hose) EN 1256 (hose assembly)

## WORKING PRESSURE 20 bar

Art. Nr.	Ø int × Ø ext	Inlet-Outlet	Coil	Stock class
841065	6×13 mm	G3/8 - G1/4	5 m	DFW
841067	6×13 mm	G3/8 - G3/8	5 m	DFW
841068	6×13 mm	G3/8 - G3/8	10 m	MTO
841071	6×13 mm	9/16"UNF - 9/16"UNF	10 m	MTO
841064	6×13 mm	9/16"UNF - 9/16"UNF	20 m	MTO
841089	8×15 mm	G3/8 - G3/8	10 m	MTO
841105	10×17 mm	G3/8 - G3/8	5 m	DFW
841109	10×17 mm	G3/8 - G3/8	10 m	DFW
841102	10×17 mm	G3/8 - G3/8	20 m	MTO

## SINGLE HOSE ACETYLENE (RED) ISO 3821 WITH FITTINGS AND NON RETURN VALVE (FOR WELDING AND ALLIED PROCESSES)

ISO 3821 EN 1256



TECHNICAL DATA

Not suitable for LPG, MPS and CNG

NON RETURN VALVE in the outlet

• Reinforcement: High tensile synthetic textile

Temperature: -20°C / +60°C
Safety factor: 3:1
Marking: In compliance with the below mentioned standard
Working pressure: 20 bar
Bursting pressure: 60 bar
Standards: ISO 3821(hose) EN 1256 (hose assembly)

Rubber hose for use with Acetylene in cutting and welding and allied processes.

• External cover: Red synthetic rubber resistant to abrasion and weather

• Inner tube: Synthetic rubber resistant to the welding gases

WORKING PRESSURE 20 bar

Art. Nr.	Ø int × Ø ext	Inlet-Outlet	Coil	Stock class
849065	6×13 mm	G3/8LH - G1/4LH	5m	DFW
849064	6×13 mm	G3/8LH - G3/8LH	5 m	DFW
849068	6×13 mm	G3/8LH - G3/8LH	10 m	MTO
849071	6×13 mm	9/16"UNF LH - 9/16"UNF LH	10 m	MTO
849067	6×13 mm	9/16"UNF LH - 9/16"UNF LH	20 m	MTO
849089	8×15 mm	G3/8LH - G3/8LH	10 m	MTO
849105	10×17 mm	G3/8LH - G3/8LH	5 m	DFW
849109	10×17 mm	G3/8LH - G3/8LH	10 m	DFW
849102	10×17 mm	G3/8LH - G3/8LH	20 m	MTO



## SINGLE HOSE PROPANE/BUTANE (ORANGE) ISO 3821 WITH FITTINGS AND NON RETURN VALVE (FOR WELDING AND ALLIED PROCESSES)

## ISO 3821 EN 1256



Rubber hose for use with Propane/Butane in cutting and welding and allied processes.

Suitable for Liquid Petroleum Gas (LPG), Methylacetylene-propadiene (MPS) gas, Compressed Natural Gas (CNG)

- Inner tube: Synthetic rubber resistant to LPG and Propane/Butane gases
- Reinforcement: High tensile synthetic textile
- External cover: Orange synthetic rubber resistant to abrasion and weather
- NON RETURN VALVE in the outlet

#### **TECHNICAL DATA**

Temperature:	-20°C / +60°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821(hose) EN 1256 (hose assembly)

# WORKING PRESSURE 20 bar

Art. Nr.	Ø int × Ø ext	Inlet-Outlet	Coil	Stock class
849113	6×13 mm	G3/8LH - G3/8LH	5 m	MTO
849114	6×13 mm	G3/8LH - G3/8LH	10 m	DFW
849117	8×15 mm	G3/8LH - G3/8LH	10 m	DFW
849119	10×17 mm	G3/8LH - G3/8LH	5 m	MTO
849120	10×17 mm	G3/8LH - G3/8LH	10 m	DFW
849121	10×17 mm	G3/8LH - G3/8LH	20 m	DFW

## **SINGLE HOSE PROPANE/BUTANE (ORANGE) EN 16436-1 WITH FITTINGS**

## EN 16436-1 EN 1256



Rubber hose for transport of Propane, Butane. Suitable for Liquid Petroleum Gas (LPG), Methylacetylene-propadiene (MPS) gas, Compressed Natural Gas (CNG).

- Inner tube: Synthetic rubber resistant to LPG and Propane/Butane gases
- Reinforcement: High tensile synthetic textile
- External cover: Orange synthetic rubber resistant to abrasion and weather

#### TECHNICAL DATA

Temperature:	-30°C / +70°C
Safety factor:	3:1
Marking:	In compliance with the below mentioned standard
Working pressure:	30 bar
Bursting pressure:	75 bar
Standards:	EN 16436-1 (hose) EN 1256 (hose assembly)

# WORKING PRESSURE 30 bar

Art. Nr.	Ø int × Ø ext	Inlet-Outlet	Coil	Stock class
546900002154	4×12 mm	G3/8LH - G3/8LH	1,5 m	DFW
546900002162	4×12 mm	G3/8LH - G3/8LH	2 m	DFW
546900016956	4×12 mm	G3/8LH - G3/8LH	2,5 m	DFW
546900002188	4×12 mm	G3/8LH - G3/8LH	3 m	DFW
546900002238	4×12 mm	G3/8LH - G3/8LH	4 m	DFW
546900002196	4×12 mm	G3/8LH - G3/8LH	5 m	DFW
546900002345	4×12 mm	G3/8LH - G3/8LH	10 m	DFW
546900002071	4×12 mm	G3/8LH - M 10×1 LH	2 m	DFW
546900002097	4×12 mm	G3/8LH - M 10×1 LH	3 m	DFW
546900002113	4×12 mm	G3/8LH - M 10×1 LH	5 m	DFW
546900037184	6×16 mm	G3/8LH - G3/8LH	3 m	DFW
546900036202	6×16 mm	G3/8LH - G3/8LH	5 m	DFW
546900039792	6×16 mm	G3/8LH - G3/8LH	10 m	DFW



## TWIN HOSE OXYGEN/ACETYLENE (BLUE/RED) ISO 3821 WITH FITTINGS AND NON RETURN VALVE (FOR WELDING AND ALLIED PROCESSES)

ISO 3821 EN 1256



Rubber twin hose for use with Oxygen/Acetylene cutting and welding and allied processes.

Not suitable for LPG, MPS and CNG

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue/red synthetic rubber resistant to abrasion and weather
- NON RETURN VALVE in the outlet

#### TECHNICAL DATA

Temperature:	-20°C / +60°C
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821 (hose) EN-1256 (hose assembly)

WORKING PRESSURE 20 bar

	ОХҮ	OXY	ACE	ACE		
Art. Nr.	Ø int × Ø ext	Inlet-Outlet	Ø int × Ø ext	Inlet-Outlet	Coil	Stock class
849060	6,3×13,3 mm	G3/8-G1/4	6,3×13,3 mm	G3/8LH-G1/4LH	5 m	DFW
849066	6,3×13,3 mm	G3/8-G1/4	6,3×13,3 mm	G3/8LH-G1/4LH	10 m	DFW
841060	6,3×13,3 mm	G3/8-G3/8	6,3×13,3 mm	G3/8LH-G3/8LH	5 m	MTO
849061	6,3×13,3 mm	G3/8-G3/8	6,3×13,3 mm	G3/8LH-G3/8LH	10 m	MTO
841080	8×15 mm	G3/8-G3/8	8×15 mm	G3/8LH-G3/8LH	5 m	DFW
841081	8×15 mm	G3/8-G3/8	8×15 mm	G3/8LH-G3/8LH	10 m	DFW
849110	10×17 mm	G3/8-G3/8	10×17 mm	G3/8LH-G3/8LH	5 m	MTO
849111	10×17 mm	G3/8-G3/8	10×17 mm	G3/8LH-G3/8LH	10 m	MTO
849112	10×17 mm	G3/8-G3/8	10×17 mm	G3/8LH-G3/8LH	20 m	MTO

## TWIN HOSE OXYGEN/ACETYLENE (BLUE/RED) ISO 3821 WITH FITTINGS AND TERMINAL CLAMP (FOR WELDING AND ALLIED PROCESSES)

ISO 3821 EN 1256



Rubber twin hose for use with Oxygen/Acetylene cutting and welding and allied processes.

Not suitable for LPG, MPS and CNG

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue/red synthetic rubber resistant to abrasion and weather
- with TERMINAL CLAMP

#### TECHNICAL DATA

Temperature:	-20°C / +60°C
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821 (hose) EN-1256 (hose assembly)

WORKING PRESSURE 20 bar

	OXY	OXY	ACE	ACE		
Art. Nr.	$\emptyset$ int $\times$ $\emptyset$ ext	Inlet-Outlet	Ø int × Ø ext	Inlet-Outlet	Coil	Stock class
14008011	4×11 mm	G1/4-G1/4	4×11 mm	G3/8LH-G3/8LH	10 m	DFW
14008246	4×11 mm	G1/4-G1/4	4×11 mm	G3/8LH-G3/8LH	20 m	DFW
14008242	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	10 m	DFW
14008243	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	20 m	DFW
14008269	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	5 m	DFW
14008239	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	10 m	DFW
14008270	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	15 m	DFW
14008240	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	20 m	DFW
14008241	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	30 m	DFW
14008245	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	40 m	MTO



## COUPLED HOSES OXYGEN/ACETYLENE (BLUE/RED) ISO 3821 WITH FITTINGS AND TERMINAL CLAMP (FOR WELDING AND ALLIED PROCESSES)

ISO 3821 EN 1256



Rubber twin hose for use with Oxygen/Acetylene cutting and welding and allied processes.

Not suitable for LPG, MPS and CNG

- Inner tube: Synthetic rubber resistant to the welding gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue/red synthetic rubber resistant to abrasion and weather
- with TERMINAL CLAMP

#### TECHNICAL DATA

Temperature:	-20°C / +60°C
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821 (hose) EN-1256 (hose assembly)

# WORKING PRESSURE 20 bar

	OXY	OXY	ACE	ACE		
Art. Nr.	Ø int × Ø ext	Inlet-Outlet	$\emptyset$ int $\times$ $\emptyset$ ext	Inlet-Outlet	Coil	Stock class
14008222	4×11 mm	G1/4-G1/4	4×11 mm	G3/8LH-G3/8LH	5 m	DFW
14008223	4×11 mm	G1/4-G1/4	4×11 mm	G3/8LH-G3/8LH	10 m	DFW
14008224	4×11 mm	G1/4-G1/4	4×11 mm	G3/8LH-G3/8LH	15 m	MTO
14008225	4×11 mm	G1/4-G1/4	4×11 mm	G3/8LH-G3/8LH	20 m	DFW
14008217	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	5 m	DFW
14008218	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	10 m	DFW
14008219	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	15 m	DFW
14008220	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	20 m	DFW
14008028	6,3 ×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	5 m	DFW
14008029	6,3 ×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	10 m	DFW
14008061	6,3 ×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	15 m	DFW
14008062	6,3 ×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	20 m	DFW
14008250	6,3 ×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	25 m	DFW
14008216	6,3 ×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	30 m	DFW
14008237	6,3 ×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	40 m	DFW



## COUPLED HOSES OXYGEN/PROPANE (BLUE/ORANGE) ISO 3821 WITH FITTINGS AND TERMINAL CLAMP (FOR WELDING AND ALLIED PROCESSES)

ISO 3821 EN 1256



Coupled rubber hoses for use with Oxygen/Propane cutting and welding and allied processes.

. Suitable for Liquid Petroleum Gas (LPG), Methylacetylene-propadiene (MPS) gas, Compressed Natural Gas (CNG).

- Inner tube OXY: Synthetic rubber resistant to the welding gases
- Inner tube PROP: Synthetic rubber resistant to LPG nad Propane/Butane gases
- Reinforcement: High tensile synthetic textile
- External cover: Blue/Orange synthetic rubber resistant to abrasion and weather
- with TERMINAL CLAMP

#### TECHNICAL DATA

Temperature:	-20°C / +60°C
Marking:	In compliance with the below mentioned standard
Working pressure:	20 bar
Bursting pressure:	60 bar
Standards:	ISO 3821 (hose) EN-1256 (hose assembly)

# WORKING PRESSURE 20 bar

	ОХҮ	OXY	PROP	PROP		
Art. Nr.	Ø int × Ø ext	Inlet-Outlet	$\emptyset$ int $\times$ $\emptyset$ ext	Inlet-Outlet	Coil	Stock class
14008227	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	5 m	DFW
14008228	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	10 m	DFW
14008229	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	15 m	DFW
14008230	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	20 m	DFW
14008231	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	25 m	MTO
14008232	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	30 m	DFW
14008233	6,3×13,3 mm	G1/4-G1/4	6,3×13,3 mm	G3/8LH-G3/8LH	40 m	DFW
14008236	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	20 m	DFW
14008249	6,3×16,0 mm	G1/4-G1/4	9,0×16,0 mm	G3/8LH-G3/8LH	40 m	DFW



## **RUBBER HOSES - TOOLS**

## **GAS WELDING HOSE REELS**



The **HOSE REELS OSV** is a professional device to distribute the welding gases (oxygen, acetylene, propane) to the workplace without leaving the hoses around the workshop.

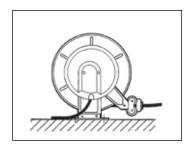
The hose reel is equipped with an AUTOMATIC REWIND system which allows an easy recall of the hose

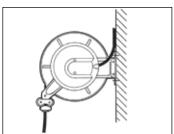
Suppled WITHOUT HOSE, it is equipped with G3/8M connections and can be combined with fitted hose (sold separately). In addition, it is equipped with nuts and hose nipples for a full compatibility with different hose sizes and gases.

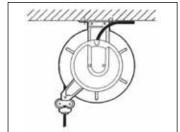
- The hose can be stopped at the desired lenght
- The hot-galvanized steel structure is moulded and coated with electrostatic polyester powder, resistant to UV rays.
- The open structure allows an easy assembly and replacement of the hose and the control of the rewinding
- The hose guide ca be fixed in 3 different positions allowing the installation in multiple positions
- Lateral covers to protect the hose connections

Only 20 kg!

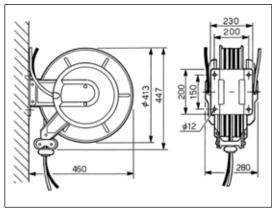
IT CAN HOST: HOSE 6×13 UP TO 25M HOSE 8×15 UP TO 20M HOSE 10×17 UP TO 15M



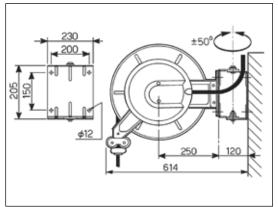




Art.Nr.	Description	QTY	Stock class
TH030100	HOSE REELS OSV without hose	1	MTO
TH030200	SWIVEL BRACKET	1	MTO



Standard configuration



Option with Swivel braket



Swivel braket



# NEW! APICS

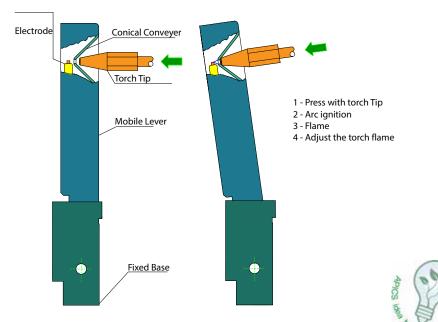
CE

Directive 2004/108/EC EN 55014-1 EN 55014-1 +EC +A1 +IS1

#### ARE YOU WORKING WITH A GAS ECONOMISER?

Do you really want to pay for pilot lights which are on all day long? Do you want to improve the safety of your working environment? Looking to increase efficiency?







APICS is a "stand alone" lighter for oxy/acetylene Brenner for welding cutting and heating. Can also be used for oxy/propane in conjunction with an existing conventional gas economiser.

#### PILOT FLAME CAN DEFINITELY BE SWITCHED OFF!

#### So:

- No naked flames in the workplace.
- No need to light pilot in the morning, switch off in the evening. No need to adjust gas levels during the course of the day.
- No build up of combustible gases in the event of pilot light being extinguished.

### **HOW DOES IT WORK?**

Through a new patented ignitor system.

#### HANDS FREE (COMPARED TO SPARK LIGHTERS)!

Simply fix APICS to the work bench, then press with the torch tip to ignite ...

Maintenance free! Constructed in long lasting stainless steel.

Apics helps the environment by reducing CO<sub>2</sub> emissions (200kg CO<sub>2</sub> is estimated emission from a pilot flame economiser).

### **SPARE PARTS KIT INCLUDES:**

- 1 electrode ceramic high voltage + spring + sealing ring
- 1 conical conveyer AISI 430
- 2 pieces (inner + outer) of high temperature heat-shrink lining

#### **LIGHTERS**

Art. Nr.	Descr.	Qt.	Stock class
548026032009	APICS SAFE LIGHTER Piezo Electric	1	DFW
548026032010	APICS SPARE PARTS KIT	1	DFW



## **TOOLS**

## LIGHTERS



Art. Nr.	Descr.	Qt.	Stock class
14008541P	Set 5 Lighters with spring	1	DFW
14008546	Spare flint for Lighter with spring 3×20 mm	10	DFW





Art. Nr.	Descr.	Qt.	Stock class
54800003001BP	Set 5 Lighters with cup	1	DFW
F161008EMB	Lighter with cup + 5 flints (blister)	1	DFW
5480003001XC	Spare flint for Lighter with cup	10	DFW
9430570	Set 50 spare flints for Lighter with cup	1	DFW



Art. Nr.	Descr.	Qt.	Stock class
9430830	Set 10 Lighters gun	1	DFW
548809562651P	Set 10 spare flints for Lighter gun 2,4×4,1 mm	1	DFW



## **TOOLS**

## **MIRROR**



## Resistant to temperatures up to 600°C



Art. Nr.	Descr.	Qt.	Stock class
15010101	Mirror 70×80×1 in steel with Magnetic base	1	DFW
15011101	Mirror 70×80×1 in steel with Handle	1	DFW

## SPARE PARTS

Art. Nr.	Descr.	Qt.	Stock class
15013101	Spare mirror plate 70×80×1 in steel	10	DFW
F161001EMB	Set 5 Spare mirror plates 70×80×1 in steel (blister)	1	ATO

## **NOZZLE CLEANER**







Art. Nr.	Descr.			Qt.	Stock class
F161054EMB	Nozzle Cleaner	BLISTER ø 0,5-2,3 mm	12 needles	1	DFW
548814071191P	ø 0,5-1,6 mm *		(10 pcs) 14 needles	1	DFW
9430860	ø 0,5-1,6 mm *		(12 pcs) 14 needles	1	DFW
9430850	ø 0,5-2,8 mm *		(12 pcs) 10 needles	1	DFW

<sup>\*</sup> not in blister





## **TOOLS**

## **WIRE BRUSHES**



Art. Nr.	Descr.	Qt.	Stock class
14008472	Wire Brush BR1 Steel	4	DFW
14008475	Wire Brush BR2 Stainless Steel	4	DFW
14008480	Wire Brush BR5 Brass	4	DFW
14008157	Wire Brush JUNIOR Brass	4	DFW

## CHARACTERISTICS

	Bristles	Rows	Wire Type	Wire Ø
Wire Brush BR1	Steel	4	Smooth	0,30-0,35 mm
Wire Brush BR2	Stainless Steel	4	Smooth	0,30-0,35 mm
Wire Brush BR5	Brass	4	Rippled	0,30-0,35 mm
Wire Brush JUNIOR	Brass	3	Rippled	0,15 mm

## **CHIPPING HAMMERS**



Art. Nr.	Descr.	मिया	kg	Qt.	Stock class
WP21103	Chipping hammer with metal handle	260 mm	260 g	1	DFW
WP21104	Chipping Hammer with wooden handle	270 mm	240 g	1	DFW



## **SPRAYS**

### **ANTISPATTER SPRAY**





**ANTISPATTER 400 ml** is a silicone free, ecologically friendly spray which is used to stop weld spatter from adhering to the torch nozzle and the work piece. Post weld cleaning requirements are reduced to a minimum. The spray is mentholated for efficiency without affecting the welding results.

Also available in 5 litres version for brush application.

Art. Nr.	Descr.	Language	Qt.	Stock class
WP22001	ANTISPATTER 400 ml	(IT-FR-DE-GB-ES)	25	DFW
WP22001B	ANTISPATTER 400 ml	(HU-RO-PL-PT-CZ)	25	DFW

#### **ANTISPATTER SPRAY NOT FLAMMABLE**







#### ANTISPATTER NOT FLAMMABLE 300ml (400g)

Silicone free, ecologically friendly spray which is used to stop weld spatter from adhering to the torch nozzle and the work piece. This spray doesn't contain flammable propellant.

Art. Nr.	Descr.	Language	Qt.	Stock class
392P000071	ANTISPATTER 300 ml spray	(HU-RO-PL-PT-CZ)	25	DFW

## **ANTISPATTER CREAM 300 G**







## ANTISPATTER Cream 300g

For specific protection of the torch nozzle from weld spatter. Dip the torch nozzle into the cream, shake to remove excess, then start welding operation.

Art. Nr.	Descr.	Language	Qt.	Stock class
WP22009	ANTISPATTER CREAM 300 g	(IT)	1	DFW

#### **ANTISPATTER LIQUID**





#### **ANTISPATTER Liquid**

Antispatter liquid to be applied with a brush.

It is used to stop weld spatter from adhering to the torch nozzle and the work piece.

Art. Nr.	Descr.	Language	Qt.	Stock class
WP22008	ANTISPATTER 5 L Tank	(IT)	5	DFW
WP220080	ANTISPATTER 25 L Tank	(IT)	25	DFW



#### **SPRAYS**

#### **GALVANIZING SPRAY**



For really fast professional results, ideal for protecting freshly exposed metal surfaces from atmospheric oxidation. Also acts as a primer for subsequent painting.

Art. Nr.	Descr.	Language	Qt.	Stock class
WP22005	ZINCSPRAY 400 ml	(IT-FR-DE-GB-ES)	25	DFW
WP22005B	ZINCSPRAY 400 ml	(HU-RO-PL-PT-CZ)	25	DFW
WP220051	INOXSPRAY 400 ml	(IT)	12	DFW

#### **LEAK DETECTION SPRAY**



#### GAS LEAK STANDARD DUTY LEAK DETECTION SPRAY 400ml

 $\textbf{GAS LEAK DETECTOR}\ is\ a\ spray\ that\ once\ sprayed\ on\ pipes\ and\ surfaces\ reveals\ the\ gas\ leak\ via\ the\ formation\ of\ bubbles.$ Ideal for plumbers and HVAC engineers to check all the pipes connections. Safe and convenient, replaces completely the old method with soapy water. Can also be used on refrigeration systems to verify refrigerant gas leakage.

Art. Nr.	Descr.	Language	Qt.	Stock class
WP22028	GAS LEAK Detector 400 ml	(IT-FR-DE-GB-ES)	25	DFW
WP22028B	GAS LEAK Detector 400 ml	(HU-RO-PL-PT-CZ)	25	DFW

#### GAS LEAK OXYGEN DUTY LEAK DETECTION SPRAY 400ML

GAS LEAK DETECTOR OXYGEN COMPATIBLE is a spray that once sprayed on pipes and surfaces reveals the gas leak via the formation of bubbles. It is compatible with OXYGEN hence it can be used to detect leaks on oxygen systems.

Art. Nr.	Descr.	Language	Qt.	Stock class
548900140303	GAS LEAK OX Detector 400 ml*	(IT-FR-DE-GB-ES)	6	DFW

<sup>\*</sup> Oxygen Compatible

#### **MULTISPRAY**



MULTISPRAY is a highly searching fluid with five functions;

Penetrating agent for rusted nuts/bolts. Water repellent action. Antioxidant preventing rust formation. General lubrication. Metal polish. The lubrication properties of this spray are particularly long lasting, making it a must have tool for general use in the workshop.

Art. Nr.	Descr.	Language	Qt.	Stock class
WP22036	MULTISPRAY 400 ml	(IT-FR-DE-GB-ES)	25	DFW

#### **CRACK DETECTORS SPRAY**



- 1 porosity 2 - work hardening
- 3 cold cracking



First use the cleaner to prepare the surface, making sure it is free from oil and grease which could affect results. Apply the dye and wait approx 15 minutes penetration to occur. Remove any excess dye with water, dry, and then apply the developer. Any defects will color the developer in 10-15 minutes.

Art. Nr.	Descr.	Qt.	Stock class
WP22030	Spray Cleaner 400 ml	12	DFW
WP22032	Spray Penetrant 400 ml	12	DFW
WP22034	Spray Developer 400 ml	12	DFW



#### **MARKERS**

#### **MARKER B**



Markal Paintstik® B Markers are true lead free paints in stick form. Weather-resistant, UV-resistant. Ideal for layout, color coding, fabrication and identification. Marks through oil and water. Marks on smooth, rough, rusty or dirty surfaces. Non-toxic.

For use on metal, wood, plastic, concrete, rubber, glass, card-board and paper.

Art. Nr.	Color	Qt.	Stock class
548900080226	Green	12	DFW
548960080220	White	12	DFW
548960084811	Yellow	12	DFW
548960084812	Red	12	DFW

#### **MARKER BALL STYLMARK**



Marker STYLMARK® is a marker in tube suitable for many kind of surfaces: metal, ceramic, glass, wood, paper, plastic.

Fast drying paint, very well resistant to temperatures up to 200  $^{\circ}\text{C}.$ 

Paint formula without halogens, sulphides, lead, cadmium, zinc, mercury. NON TOXIC

50ml tubes double wall reinforced (Aluminum-Plastic) to avoid accidental spillage. Operating temperature:  $-20^{\circ}\text{C}$  +70°C

Tip Ball 3mm (1/8")

Art. Nr.	Color	Qt.	Stock class
WP23040	Yellow	10	DFW
WP23041	White	10	DFW
WP23042	Red	10	DFW

#### **BALL MARKER (LIQUID IN BOTTLE)**



Liquid paint marker with ball tip. An ideal replacement for tube markers.

 $\label{lem:much less waste of color. Features an auto cleaning closure to prevent clogging. \\$ 

Unbreakable plastic bottle very durable and resistant to impact or crushing.

Suitable for any hard surface, wet, oily or rippled (metal, wood, glass, plastic, concrete, stones, etc.)

Lead free, NON TOXIC. The paint dries in 5 min.

Resistant to weather and fade.

Operating temperature: -46°C +66°C

Tip Ball 3 mm (1/8")





Art. Nr.	Color	Qt.	Stock class
548900084600	White	1	DFW
548960084601	Yellow	1	DFW



#### **MARKERS**

#### **VALVE ACTION MARKER**



Valve Action is a quick-drying liquid paint marker suitable for long-lasting markings, resistant to wear and weathering. The paint is Xylene-free, reduces the health risks and is safe for the use on any surface. Suitable for steel, iron, plastics, glass, rubber, textiles, etc.

- Quick drying permanent paint.
- Xylene-free paint
- For low corrosion applications
- Round tip wear resistant D.3 mm
- Metal tank to reduce the risk of breaking.



Art. Nr.	Color	Qt.	Stock class
548900096820	WHITE	12	DFW
548900096821	YELLOW	12	MTO
548900096823	BLACK	12	MTO

#### **MARKER SOAPSTONE**



Delivered in practical plastic bags with 10 pcs.



Marker in soap-stone available in round or flat shape. A holder can be purchased separately to protect markers, prevent	Ċ
break up in use, and allow maximum consumption of the product.	

Art. Nr.	Descr.		Qt.	Stock class
548960080129	Soapstone FLAT	125×4×12 mm	20	DFW
548960080130	Soapstone ROUND	125× 0 5 mm	20	DFW

Art. Nr.	Descr.	Qt.	Stock class
548960080140	HOLDER for Soapstone Flat	1	DFW
548960080141	HOLDER for Soapstone Round	1	DFW

#### THERMOCHALK THERMOMELT



A very quick way to measure the surface temperature. When the surface temperatures reaches the desired level the paint melts. Operates in narrow range for maximum accuracy. The 100 degree version is ideal for ensuring moisture has been driven off prior to welding.

Art. Nr.	Descr.	Qt.	Stock class
548960086490	THERMOMELT 83°C	12	MTO
548960086401	THERMOMELT 100°C	12	DFW
548900086562	THERMOMELT 121°C	12	DFW
548960084664	THERMOMELT 150°C	12	DFW
548960086410	THERMOMELT 175°C	12	MTO
548960086706	THERMOMELT 184°C	12	MTO
548960086516	THERMOMELT 200°C	12	DFW
548960086563	THERMOMELT 250°C	12	DFW
548960086626	THERMOMELT 300°C	12	MTO
548960086698	THERMOMELT 350°C	12	DFW
548960086734	THERMOMELT 400°C	12	MTO
548960086770	THERMOMELT 450°C	12	MTO
548960086807	THERMOMELT 500°C	12	MTO
548960086824	THERMOMELT 550°C	12	MTO
548960086842	THERMOMELT 600°C	12	MTO
548960086860	THERMOMELT 650°C	12	MTO
548960086870	THERMOMELT 700°C	12	MTO
548960086878	THERMOMELT 750°C	12	MTO
548960086887	THERMOMELT 800°C	12	MTO





# **BRASOTEK**

BRASOTEK is an innovative product for the preparation of the joints before brazing. This liquid product allows for a perfect cleaning through chemical reaction without any hazard for the operator. Once applied with the extremely practical marker, BRASOTEK develops a protective coating that keeps the pieces clean and deoxidized much longer (up to 2 hours).

Oxidation is the worst enemy of welds.

BRASOTEK removes completely all the dirt and the oxides from the surfaces to be joined, boosting the penetration of filler metal in depth. It facilitates the preheating by improving heat distribution and helping to prevent burns.

It reduces the preparation time because the pieces are processed only once, without using steel wool, abrasive paper or wire brush.

For brazing alloys copper-copper, copper-iron, copper-brass, copper-bronze, copper-inox, brass-inox. Not for preparation of alloys for arcwelding or aluminum materials.

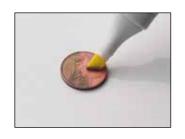
Particularly suitable in the sectors of refrigeration, maintenance, installers, etc.

#### NON-TOXIC, NON-POLLUTING

#### REDUCED USE OF FLUXES

- · Significant working time reduction.
- Reduction of risks for the operator.
- Perfect welding of different metals (copper-brass, copper-bronze, coppersteel).
- Cost saving
- Double tips marker or big size marker (22 mm)





#### PATENTED FORMULA



Art. Nr.	Description	Qt.	Stock class
WP25000	BRASOTEK KIT (Marker + 1 Cartridge)	1	DFW
WP25001	BRASOTEK KIT XL (Marker + 2 Cartridges)	1	DFW
WP25010	BRASOTEK REFILL SET (4 Cartridges)	1	DFW





#### THERMAL PROTECTION

#### **HELIOS 1000 THERMAL MAT**



Insulating thermal mat made of high-quality silica fibers coupled both sides with felt layers of PAN (carbon fiber). This mat is perfect when there's the need to protect small things near the piece to be welded from high temperatures and welding spatters above all when welding on-site. Suitable for welders that operate on-site (repair of cars, small workshops, heating & ventilation, plumbing, etc.).

- Asbestos-free and ceramics-free.
- Usable from both sides.
- Reinforced edges with stitching.
- Black color anti-glare.
- Resistant to most chemicals.
- Excellent flexibility and handling.

#### PROTECTION FROM HEAT UP TO 1000°C.

#### TECHNICAL DATA

Material:	silica fibers and carbon fiber
Dimensions:	210×290 mm
Heat protection:	up to 1000°C

Art. Nr.	Description	Qt.	Stock class
A200153	THERMAL MAT HELIOS 1000 in blister	1	DFW

#### **PROTECTIVE SCREENS**

#### TRANSECO - PROTECTIVE SCREEN MOBILE PANEL WITH WELDING CURTAIN - ISO 25980



TRANSECO is a mobile protective screen, but at the same time very stable. Thanks to its overlapping feet it can be conbined and expanded. Tha frame is made from steel tube with epoxy powder coating.

The curtain with its folded edges comes stretched between the top and the bottom. The kit comes complete for an easy assembly.

Protective against hazardous UV- and IR- rays and resistant ignition.

In compliance with ISO 25980.

#### TECHNICAL DATA

Frame size:	H.1870 × W.1455 mm
Curtain size:	H.1600 × W.1400 × T.0,4 mm
Ground clearance:	approx 250 mm
Weight:	8,2 kg

Art. Nr.	Descr.	Color	Qt.	Stock class
TTOTTVET75M	TransEco T75	Dark green (matt)	1	DFW
TTOTTVET40	TransEco T40	Red	1	DFW



#### **PROTECTIVE SCREENS**

#### TRANSFLEX - PROTECTIVE SCREEN MOBILE PANEL WITH WELDING CURTAIN ISO 25980



TRANSFLEX is a mobile protective screen mounted on wheels for increased mobility. The frame is made of steel tube coated with epoxy powder.

The curtain can be hung to the top of frame by means of sliding hooks supplied with the kit. The kit comes complete for an easy assembly.

Protective against hazardous UV- and IR- rays and resistant to ignition. In compliance with ISO 25980.

#### Including wheels

#### TECHNICAL DATA

Frame size:	H.1995 × W.2100 mm
Curtain size:	H.1950 × W.2100 mm × T.0,4 mm
Ground clearance:	approx 300 mm

Art. Nr.	Descr.	Color	Qt.	Stock class
TTOTTVS075M	TransFlex T75	Dark green (matt)	1	MTO
TTOTTVS040	TransFlex T40	Red	1	MTO

#### **SPARE PARTS**

Art. Nr.	Descr.	Qt.	Stock class
TTOZROLLE100	Set of 4 wheels	1	MTO

#### TRANSFLEX - PROTECTIVE SCREEN MOBILE PANEL AND WITH WELDING CURTAIN - ISO 25980 (WITH EXTENSIONS)



TRANSFLEX WITH EXTENSIONS is mobile protective screen mounted on wheels for increased mobility. The frame is made of steel tube coated with epoxy powder and is provided with two side extensions swivel that allow to reach 3,7 m opening and separate the workplace with a single device.

The curtain can be hung to the top of frame by means of sliding hooks supplied with the kit. The kit comes complete for an easy assembly.

Protective against hazardous UV- and IR- rays and resistant to ignition. In compliance with ISO 25980.

#### Including wheels

#### **TECHNICAL DATA**

Frame size:	H.1995 × W.3700 mm (1 base 2100 mm +
	2 arms 800 mm)
Curtain size:	H.1950 × W.3700 mm × T.0,4 mm
Ground clearance:	approx 300 mm

Art. Nr.	Descr.	Color	Thickness	Qt.	Stock class
TTOTTVST75M	TransFlex T75	Dark green (matt)	0,4 mm	1	MTO
TTOTTVST40	TransFlex T40	Red	0,4 mm	1	MTO
TTOTTLST40	TransFlex T40	Red	1,0 mm	1	MTO

#### **SPARE PARTS**

Art. Nr.	Descr.	Qt.	Stock class
TTOZROLLE100	Set of 4 running wheels	1	MTO







# THE LCD RANGE

# **YOUR CHOICE!!**

#### ONE OF THE MOST IMPORTANT LCD RANGES ON THE MARKET WHEN IT COMES TO EYE PROTECTION!

The GCE range includes many models designed to satisfy even the most demanding welders and suitable for any kind of usage. Starting from economic model, ideal for basic and standard usages, up to the most professional models with digital regulation and ventilation.

All our filters provide an instant auto-darkening for better user safety, and have the following features:

- Shade selection
- Delay Adjustment (Dark to Light time delay)
- Sensitivity Adjustment

The most professional models are suitable for pulsed arc welding MIG /TIG, where the pulses would otherwise cause (at low value) a momentary opening of the darkened lens. Some models are equipped with the innovative ColorView optical technology.



#### THE COLORVIEW OPTICAL TECHNOLOGY

Stop to the green shades. Now weld in colors!

The ColorView optics is a new advanced technology that lets you see the workpiece in real colors. Finally we can say stop to watching in green shades. The auto-darkening filters equipped with ColorView optics allow you to see all the colors of your workpiece.

Welding in colors allows you to better distinguish the welding arc and better control the temperature of the workpiece. It also allows a better view of the environment around the piece (for instance, for controlling the parameters of the welding systems).

A really improved comfort during welding.



New welding filter with ColorView optical technology



Traditional welding filter with Green shade

#### WHAT TO LOOK AT WHEN CHOOSING A LCD MASK SUITABLE FOR TIG WELDING

The TIG welding is a process of arc welding with infusible electrode (tungsten) that allows to perform high-quality joints. This technology uses a very low amperage current to start the welding arc.

A mask for TIG welding must therefore ensure high sensitivity to low amperages.

The sensitivity depends on the quality of the sensors, the number of sensors and on the quality of the electronics.

But setting always the sensitivity to maximum is not a good idea because if the welder works near others operators, it may happen that their arc interferes with the mask, obscuring it. It is therefore opportune adjusting the sensitivity to avoid this kind of problems.







# **Auto Darkening Goggle**

The SUPERVISOR Auto Darkening Goggle is a new generation product for labour protection that ensures safety and the maximum comfort to the worker. The SUPERVISOR Auto Darkening Goggle can work as a standard safety goggle and then automatically change its shade stage to protect your eyes from hazardous lights or harmful rays.



#### EN-379

Shades and sensitivity can be adjusted by means of a control panel. Lightweight and simple frame, tight fit, and extra comfort will reduce the pressure on your face throughout the working time. Highly Effective for operations of Grinding, supervision of Arc Welding, Spot Welding, Gas Cutting & Welding, Plasma Cutting, Gouging, etc.

#### HELMETS WITH LCD FILTER FEATURES

- Optical Class: 1/1/1/2
- Shade Adjustment # 5/11
- Sensitivity with 5 steps Adjustment
- Lightweight (only 107 g)
- Ultrasoft rubber pad
- Low Battery Alarm
- Auto power off
- Free hands for your operations
- · Perfect fit also with hard hat
- Storage case included
- Neck cord, spare batteries and spare protection lens included

Storage case

#### **GENERAL APPLICATIONS**

Supervision, inspection and control of Cutting & Welding operations.

Art. Nr.	Descr.	Qt.	Stock class
19007000	GOGGLE SUPERVISOR LCD 5-11	1	DFW







#### WE CAN MAKE YOUR WORK ENVIRONMENT HEALTHIER AND MORE COMFORTABLE!





Mach 3 Wind is an integrated protection system which combines the high technology of a LCD filter with digital controls with the advanced Powered Air Purifying Respirator (PAPR) with rechargeable battery. The ventilation system, the connection equipment and the lightweight helmet ensure comfort and ease of use rarely seen before.

The new LCD filter ColorView Infotrack allows to see the workpiece in colors and to monitor the welding time and environment's temperature.





Belt clip for mask hanging included.



Supplied in a sporty bag



#### EXTRAORDINARY HEADGEAR

Tilting back strap
The tilting rear strap fits the head
shape and allows for better weight
distribution.

Two straps on the headtop.
Ultrasoft straps adjustable in
length provide for better comfort.



## THE NEW COLORVIEW OPTICAL TECHNOLOGY

Stop to the green shades. Now weld in colors! The ColorView optical technology lets you see the workpiece in real colors.

#### **INFOTRACKSYSTEM**

The InfotrackSystem monitors the welding arc time and detects the workplace temperature.

Moreover, with clock and alarm.





Tilting cushion pad joints
The tilting joint of the neck bracket
enables natural adaptation to the
head shape.

Integrated confort cuschon pad. The new comfortable cushion wraps completely the nape, providing better weight distribution and thus minimizing the neck strain.



#### **MACH 3 WIND**

#### **VENTILATION UNIT FEATURES**

- Particle filter certified EN 12941 TH2 P(SL) (typically 2 months use)
- Odour filter with active charcoal (optional)
- Acoustic and vibration alarm where ventilation is not effective
- Adjustable ventilation air flow (160 l/min or 200 l/min)
- Rechargeable battery (typical 10 hours use)
- Battery Recharge time: 3 hours
- Battery charger included
- Supplied with belt and shoulder bands (for a better comfort)
- Flow meter included to verify actual system ventilation
- Air hose length: 87cm
- Weight: PAPR 1350g Air hose 220g
- WARRANTY: 12 months

#### HELMETS WITH LCD FILTER FEATURES

- OPTICAL CLASS: 1/1/1/2
- Large viewing area for maximum comfort (97×60 mm)
- 4 sensors
- Environment's Temperature measurement.
- Welding Time tracking and Alarm setting.
- Digital regulation of all the parameters on a LCD display
- WELD-mode (# 9-13) suitable for MIG/TIG welding
- CUT-mode (# 5-9) suitable for Oxygas cutting and welding
- X-mode (# 9-13 high sensitive) suitable for Plasma and all the processes requiring high sensitivity
- GRIND-mode (external button) suitable for grinding operations
- Sensitivity adjustment
- Delay time adjustment (dark to light time)
- Headgear light and fully adjustable
- Weight: Helmet 610g
- WARRANTY: 24 months

Art. Nr.	Descr.	Qt.	Stock class
AD020001	Mach 3 WIND - INFOTRACK with ColorView LCD filter	1	DFW
Art. Nr.	Descr.	Qt.	Stock class
19009001	Mach III WIND - INFOTRACK (old model)	1	
	AD020001 Art. Nr.	AD020001 Mach 3 WIND - INFOTRACK with ColorView LCD filter  Art. Nr. Descr.	AD020001 Mach 3 WIND - INFOTRACK with ColorView LCD filter 1  Art. Nr. Descr. Qt.

#### **MACH 3 WIND - SPARE PARTS FOR HELMET**





Art. Nr.	Descr.	Qt.	Stock class
19009013WTK	Helmet blue MACH 3 WIND	1	DFW
AD030006	LCD filter MACH 3 - ColorView, Infrotrack	1	DFW
WP110350	Battery for LCD filter (CR2450 Lithium battery)	1	DFW
19009017C	External Protective Lens curved MACH 3	5	DFW
19009019	Internal Protective Lens 63×106×1	10	DFW
19009028C	Rubber gasket for curved glass	1	DFW
19009029C	Front filter frame blue for curved glass	1	DFW
19009038	Heat protection frame for LCD (aluminium), (protection up to 80°C)	1	MTO
AD030001	Headgear MACH with extended pad	1	DFW
14008384	Sweatband for headgear MACH	5	DFW
19009021	Face sealing hood in blue cotton	1	DFW
19009011	Air hose (87 cm) complete with connectors and cover (blue)	1	DFW
	Magnifying lenses on request		

#### **MACH 3 WIND - SPARE PARTS FOR VENTILATION UNIT**



Art. Nr.	Descr.	Qt.	Stock class
19009007	Ventilation unit cover	1	DFW
19009008	Sparks filter	1	DFW
19009005	Pre-filter	10	DFW
19009003	Particle filter TH2 P (SL)	1	DFW
19009009	Odour filter with active charcoal (optional)	1	DFW
19009027	Ventilation unit (Motor + cover)	1	DFW
19009023	Battery for ventilation unit	1	DFW
19009025	Battery Charger Single	1	DFW
19009030	Belt set	1	DFW
19009031	Belt cushion	1	MTO
19009032	Shoulder strap	1	DFW







Mach 3 is a LCD mask designed to satisfy the most exigent welders.

Suitable for TIG, PLASMA and OXYGAS cutting and welding.

This helmet is one of the most performant on the market.

The new LCD filter ColorView Infotrack with digital control allows to see the workpiece in colors and to monitor the welding time and environment's temperature.

This mask is equipped the new comfortable headgear.





#### IT WORKS WITH BATTERIES + SOLAR CELLS

#### **TECHNICAL DATA**

OPTICAL CLASS:	1/1/1/2 (one of the best on the market)
Viewing Area:	97×60 mm (max comfort)
Sensing:	4 sensors
Reaction time:	0,05 msec
Sensitivity:	digital adjustment
Delay time:	digital adjustment
WELD mode:	# 9-13 (MIG/TIG)
CUT mode:	# 5-9 (OXYGAS)
X mode:	# 9-13 (PLASMA and high sensitivity processes)
GRIND mode:	external button
Optionals:	Magnifying lenses
Headgear:	New model COMFORT Multiple positions adjustment
Standards:	EN-379 (filter) EN-175 (helmet)
Warranty:	24 months



#### THENEW COLORVIEW OPTICAL TECHNOLOGY

Stop to the green shades.

Now weld in colors!

The ColorView optical technology lets you see the workpiece in real colors.

#### **INFOTRACKSYSTEM**

The InfotrackSystem monitors the welding arc time and detects the workplace temperature.

Moreover, with clock and alarm.





Extraordinary headgea

AVAILABLE AFTER SELLING OUT TH
PREVIOUS MODEL

<b>AVAILABLE</b>	UNTIL:	STOCK L	LASTS

Art. Nr.	Descr.	Qt.	Stock class
AD010001	Mach 3 - INFOTRACK with ColorView LCD filter	1	DFW
Art. Nr.	Descr.	Qt.	Stock class

19009000 Mach III - INFOTRACK (old model)







 $Eclipse \ 3.s \ is \ an \ extraordinary \ and \ professional \ TIG \ mask, \ extra \ sensitive \ at \ an \ incredible \ price!$ 

The new LCD filter has now the variable shade selection 5-9 and 9-13.

 $Provided\ with\ 4\ sensors\ and\ an\ incredibly\ large\ view\ area\ for\ a\ great\ improvement\ of\ working\ conditions.\ Very\ high\ quality\ performance.$ 













#### IT WORKS WITH BATTERIES + SOLAR CELLS

#### **TECHNICAL DATA**

OPTICAL CLASS:	1/2/1/1 (one of the best on the market)
Viewing Area:	100×60 mm Extra large
Sensing:	4 sensors
Reaction time:	0,08 msec
Sensitivity:	stepless adjustment
Delay time:	stepless adjustment (from 0,1 sec to 0,9 sec)
WELD mode:	# 9-13 (MIG/TIG)
CUT mode:	# 5-9 (OXYGAS)
GRIND mode:	YES
Headgear:	New model with multiple positions adjustment
Standards:	EN-379 (filter) EN-175 (helmet)
Warranty:	24 months



New LCD filter with shade selection 5-9 and 9-13. Extremely intuitive control panel.



New headgear with adjustment of nose-filter distance.

AVAILABLE AFTER SELLING OUT THE	Art. Nr.	Descr.	Qt.	Stock class
	AD010003	Eclipse 3.s - 5/9 - 13	1	DFW
PREVIOUS MODEL				
		_		
	Art. Nr.	Descr.	Qt.	Stock class
AVAILABLE UNTIL STOCK LASTS	0764703E	Eclipse-3 9-13 - TIG SENSITIVE (old model)	1	DFW







Mach 2 is a LCD mask specifically designed for TIG welding.

It works with batteries and solar cells.

The new LCD filter with ColorView optical technology allows to see the workpiece in colors and thanks to the very quick reaction time (0,05m sec) it provides a very high quality performance.

This mask is equipped the new headgear with extended nape cushion pad, for optimal comfort.





#### IT WORKS WITH BATTERIES + SOLAR CELLS

#### **TECHNICAL DATA**

OPTICAL CLASS:	1/1/1/2 (one of the best on the market)
View Area:	97×47 mm double LCD layer
Sensing:	2 sensors
Reaction time:	0,05 msec
Sensitivity:	internal adjustment stepless
Delay time:	internal adjustment stepless (from 0,1sec to 1,0sec)
Dark shade:	# 9-13 external adjustment
Grinding mode:	internal adjustment disabling sensors
Optionals:	Magnifying lenses
Headgear:	New model COMFORT Multiple positions adjustment
Standards:	EN-379 (filter) EN-175 (helmet)
Warranty:	24 months



#### THENEW COLORVIEW OPTICAL TECHNOLOGY

Stop to the green shades.

Now weld in colors!

The ColorView optical technology lets you see the workpiece in real colors.





Extraordinary headgear

,	VAILABLE AFTER SELLING OUT THE
	REVIOUS MODEL

AVAILABLE	UNTIL	STOCK LASTS	
	•	5.0 cm 2.15.5	

Art. Nr.	Descr.	Qt.	Stock class
AD010002	Mach 2 - with ColorView LCD filter	1	DFW
Art. Nr.	Descr.	Qt.	Stock class
19008001	Mach II 9-13 - TIG SENSITIVE (old model)	1	DFW







Eclipse 2.s is a very reliable mask for MIG/Electrode welding, working only with solar cells (no batteries).

The new LCD filter has now one of the best optical class on the market and now comes with an enlarged viewing area and the grind function.







#### IT WORKS WITHOUT BATTERIES

#### TECHNICAL DATA

OPTICAL CLASS:	1/1/1/2 (one of the best on the market)
View Area:	96×42 mm
Sensing:	2 sensors
Reaction time:	0,1 msec
Sensitivity:	internal adjustment stepless
Delay time:	internal adjustment stepless (from 0,1sec to 0,9sec)
Dark shade:	# 9-13 external adjustment
Grinding mode:	yes
Headgear:	Multiple positions adjustment
Standards:	EN-379 (filter) EN-175 (helmet)
Warranty:	24 months



New LCD filter with upgraded optical class and enlarged viewing area.



Headgear with multiple position adjustment

AVAILABLE AFTER SELLING OUT THE	E
PREVIOUS MODEL	

**AVAILABLE UNTIL STOCK LASTS** 

Art. Nr.	Descr.	Qt.	Stock class
AD010004	Eclipse 2.s - with new LCD filter	1	DFW
Art. Nr.	Descr.	Qt.	Stock class



## **SPARE PARTS**

	EXTERNAL PROTECTIVE LENS	INTERNAL PROTECTIVE LENS	HEADGEAR	SWEATBAND	HELMET	NAPE CUSHION
AD010001 MACH 3	19009017C (curved) 5 pcs	19009019 (63 ×106×1) 10 pcs	AD030001 1 pcs	14008384 5 pcs	19009013TK 1 pcs	AD030002 1 pcs
AD010002 MACH 2	WP110346 (shaped) (100 ×122) 10 pcs	WP110344 (51 ×107) 10 pcs	AD030001 1 pcs	14008384 5 pcs	14008382 1 pcs	AD030002 1 pcs
AD010003 ECLIPSE 3.s	WP110360 (114 ×133) 5 pcs	WP110330 (66×106) 5 pcs	AD030003 1 pcs	WP11476 5 pcs	AD030004 1 pcs	Not available
AD010004 ECLIPSE 2.s	548980003920 (90 ×110) 10 pcs	WP11474S (47 ×103,5) 10 pcs	HG2001 1 pcs	WP11476 5 pcs	AD030005 1 pcs	Not available

#### **SPARE PARTS (DISCONTINUED MODELS)**

	EXTERNAL PROTECTIVE LENS	INTERNAL PROTECTIVE LENS	HEADGEAR	SWEATBAND	HELMET	NAPE CUSHION
19009000 MACH III DIN 9-13	19009017C (curved) 5 pcs	19009019 (63×106×1) 10 pcs	WP110347TK 1 pcs	14008384 5 pcs	19009013TK 1 pcs	WP110349 1 pcs
19008001 MACH II DIN 9-13	WP110346 (shaped) (100 ×122) 10 pcs	WP110344 (5 ×107) 10 pcs	WP110347 TK 1 pcs	14008384 5 pcs	14008382 1 pcs	WP110349 1 pcs
0764703E ECLIPSE 3 9-13	WP110360 (114×133) 5 pcs	WP110330 (66×106) 5 pcs	HG2001 1 pcs	WP11476 5 pcs	AS4001F 1 pcs	Not available
0764702E ECLIPSE II 9-13	548980003920 (90×110) 10 pcs	WP11474S (47×103,5) 10 pcs	HG2001 1 pcs	WP11476 5 pcs	AS3000F 1 pcs	Not available
WP11444SEU OPTOVARIO 9-13 SE	WP11500 (shaped) 100 × 120 10 pcs	548980003920 (90 ×110) 10 pcs	WP11504 1 pcs	WP11420 -16 2 pcs	WP11502 1 pcs	Not available
WP11444HQ OPTOVARIO 9-13 HQ	WP110346 (shaped) (100 ×122) 10 pcs	WP110344 (51 ×107) 10 pcs	WP110347 1 pcs	14008384 5 pcs	Not available	Not available



# WHAT FEATURES DEFINE THE QUALITY OF A LCD MASK?

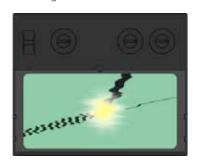
#### THE OPTICAL CLASS

The optical class is defined by the standard EN-379 and is one of the most important characteristics to look at when choosing a LCD mask. It is composed of 4 values which corresponds to the rating of 4 optical features.

The rating may be 1 (excellent), 2 (good) or 3 (sufficient).

#### Feature 1: OPTICAL CLASS

This is the evaluation of LCD surface. Is the view perfectly regular?
Are there image's distortions?



#### **Feature 2: LIGHT DIFFUSION**

This is the evaluation of homogeneity of LCD in dark status.

Are there areas lighter or darker?



#### Feature 3: LIGHT TRANSMITTANCE

This is the evaluation of Light Transmittance.

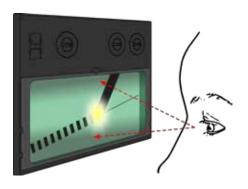
Does the light pass through the filter without spreading in a bigger halo?



#### Feature 4: ANGULAR DEPENDENCY

This is the evaluation of the darkening variation depending on the viewing angle.

Looking through the filter in different directions (for instance during overhead welding) is the dark status always the same?



#### FOR EXAMPLE A FILTER WITH INDICATION 1/1/1/2 WILL HAVE:

- Excellent Optical Class (1)
- Excellent Class of light Diffusion (1)
- Excellent light transmission (1)
- Good angular dependence (2)

#### SWITCHING TIME FROM CLEAR TO DARK STATUS.

Usually the switching time is 0,02-0,05 msec. This is very good and possible only with LCD filters working with batteries support. The LCD filters working only with solar cells may reach a switching time 0,1-0,3 msec, anyway very good.

0,1 msec is a tenth of a thousandth of a second, a speed practically imperceptible to the human eye.

This feature is clearly indicated in our catalogue.

#### THE SOLAR CELLS WHAT ARE THEY FOR?

The solar cells provide the power to the LCD filter.

On some models they can be the unique power supply.

The strength is that it's never necessary to replace the batteries. The weakness is that the switching time cannot be less than 0,1 msec (anyway very good).

On some other models they can be the additional power to the batteries.

The strength is that the switching time can be less than 0,1 msec (also 0,05 msec) and a longer batteries lifetime.

The weakness is that the user is forced to replace the batteries when necessary.



#### **HELMETS & SHIELDS**

#### EUROPE (90 imes 110) - VERONA (75 imes 98) - LYON (51 imes 108)



Extraordinary! With the Europe, Verona and Lyon range you do not commit to flip front or fixed front style at the time of purchase.

The style can be changed after purchase with the cassette for flip option, which can be quickly and easily assembled onto the mask without the need for any special tools. In this way the inventory of complete helmets can be reduced by holding a small stock of cassettes.

The headgear is fully adjustable for maximum comfort.

Supplied without lenses.

#### **FEATURES**

- Material: Polypropylene
- Dimensions: 210×345×180 mm
- Weight: 420 g
- Headgear: fully adjustable for maximum comfort
- Standard: EN 175



#### FLIP OPTION!!



Art. Nr.	Descr.	View Area	Qt.	Stock class
548910000017	Helmet Europe	90×110 mm	5	DFW
WP11064	Helmet Verona	75×98 mm	5	DFW
G100223	Helmet Lyon	50×108 mm	5	DFW

#### **OPTIONALS - FLIP SYSTEM CASSETTE**

Art. Nr.	Descr.	Qt.	Stock class
WP11065E	Flip for helmet Europe (90×110)	1	DFW
WP11065	Flip for helmet Verona (75×98)	1	DFW
G100223F	Flip for helmet Lyon (50×108 - 50×105)	1	DFW
	•		

#### SPARE PARTS

Art. Nr.	Descr.	Qt.	Stock class
548100000020	Headgear for all models	1	DFW

#### **EURO (90 × 110 mm)**



The helmet EURO is an strong helmet made from polyamide fiberglass-reinforced which prolong durability. Provided with comfortable headgear.

#### **FEATURES**

- Material: Polyamide fiberglass-reinforced
- Dimensions: 380×260×210 mm
- Weight: 440 g
- Heat resistance: up to 140°C
- Standard: EN-175

Art. Nr.	Descr.	View Area	Qt.	Stock class
17001804	Helmet EURO	90×110 mm	1	DFW



#### **HELMETS & SHIELDS**

#### **COMFORT (75 × 98)**



The helmet COMFORT is a cellulose fibre helmet with a professional headgear adjustment system which can be modified while wearing the helmet. It is particularly suitable for those application where the user is unable to hold the mask with the hands.

#### Supplied without lens.

#### FFATURES

- Material: Cellulose fiber
- Dimensions: 325×210×178 mm
- Weight: 320 g
- Standard: EN-175
- PPE Category: II

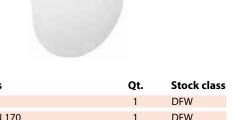
	Aut Nu	Doces	View Area	0+	Stock class
	Art. Nr.	Descr.	view Area	Qt.	Stock class
100	548914011003	Helmet COMFORT	75×98 mm	10	DFW

#### **VISOR**



Visor is a face shield for eyes and face protection. Standard headgear, with the possibility to hold clear shield for grinding, or shade 5 shield for cutting and welding.

- Standard: EN-166
- PPE Category: III
- Antiscratch (mod. DIN 5)
- IR&UV Protections (mod. DIN 5)
- UV Protection (mod. CLEAR)



Art. Nr.	Descr.	Standards	Qt.	Stock class
WP14032	Visor Holder		1	DFW
WP14034	Visor Shield Clear 2 mm	EN 166 - EN 170	1	DFW
WP14037	Visor Shield Clear 1 mm	EN 166 - EN 170	1	DFW
WP14036	Visor Shield DIN5 2 mm	EN 166 - EN 169 - EN 175	1	DFW

#### **HAND SHIELDS**

#### MM1010 (GLASS 90 × 110 mm)



Hand shield in polyamide provided with quick coupling handle.

#### **FEATURES**

- Material: polyamide
- Dimensions: 240×395×98 mm
- Weight 305 g
- Standard: EN-175

Art. Nr.	Descr.	View area	Qt.	Stock class
548910000016	Hand shield MM1010	90×110 mm	1	DFW



#### HAND SHIELDS

#### STR SIMPLE (GLASS $50 \times 105 \text{ mm}$ )



STR SIMPLE is a black nylon hand shield showing good heat resistance in the event of accidental contact with hot electrodes.



Art. Nr.	Descr.	View Area	Qt.	Stock class
G100202	Hand shield STR SIMPLE	50×105 mm	1	DFW

#### ELETTRA (GLASS 75 × 98 mm)





ELETTRA is a hand shield made from cellulose fiber. It is one of the most popular masks for the use with small-medium machines (up to 250A). The new and exclusive "quick glass" fixing system allows a very speedy change of the  $75\times98$  mm lenses without the need of any tool. No metallic rivets are used in the production process!

#### Supplied without lens.

#### **FEATURES**

- Material: Cellulose fiber
- Dimensions: 75×255×378 mm
- Weight: 260 g
- Standard: EN-175
- PPE Category: II



Art. Nr.	Descr.	View Area	Qt.	Stock class
548914011001	Hand shield ELETTRA	75×98 mm	20	DFW

#### VULCAN (GLASS $75 \times 98 \text{ mm}$ )



VULCAN is a professional hand shield manufactured from cellulose fiber. It has a specific design with inclined throat protection making the mask suitable for welding in uncomfortable positions. It is suitable for all kind of electrode welding and -/MAG applications.

The new and exclusive "quick glass" fixing system allows a very speedy change of the 75×98 mm lenses without the need of any tool. No metallic rivets are used in the production process!

#### Supplied without lens.

#### **FEATURES**

- Material: Cellulose fiber
- Dimensions: 260×390×81 mm
- Weight: 320 g
- Standard: EN-175
- PPE Category: II



Art. Nr.	Descr.	View Area	Qt.	Stock class
548914011002	Hand shield VULCAN	75×98 mm	20	DFW



# **SPARE PART LENSES**

# LENSES 75 $\times$ 98 mm

#### IR & UV PROTECTION



Art. Nr.	Material	Shade	Color	Dimension	Qt.	Stock class
WP11021	Glass	Clear	Clear	75×98 mm	100	DFW
WP11072	Glass	DIN9	Green	75×98 mm	10	DFW
WP11074	Glass	DIN10	Green	75×98 mm	10	DFW
WP11076	Glass	DIN11	Green	75×98 mm	10	DFW
WP11078	Glass	DIN12	Green	75×98 mm	10	DFW
WP11066	Glass	DIN10	SILVERED MIRROR	75×98 mm	10	DFW
WP11067	Glass	DIN11	SILVERED MIRROR	75×98 mm	10	DFW
WP11022	Glass	DIN12	SILVERED MIRROR	75×98 mm	10	DFW

#### LENSES 90 imes 110 mm

#### **IR & UV PROTECTION**



Art. Nr.	Material	Shade	Color	Dimension	Qt.	Stock class
548980003921	Glass	Clear	Clear	90×110 mm	100	DFW
548980055011	Glass	DIN8	Green	90×110 mm	10	DFW
548980055012	Glass	DIN9	Green	90×110 mm	10	DFW
548980055013	Glass	DIN10	Green	90×110 mm	10	DFW
548980056013	Glass	DIN11	Green	90×110 mm	10	DFW
548980050013	Glass	DIN12	Green	90×110 mm	10	DFW
548980057014	Glass	DIN13	Green	90×110 mm	10	DFW
548980057015	Glass	DIN14	Green	90×110 mm	10	DFW
548900200100	Glass	DIN10	SILVERED MIRROR	90×110 mm	10	DFW
548900200110	Glass	DIN11	SILVERED MIRROR	90×110 mm	10	DFW
548900200120	Glass	DIN12	SILVERED MIRROR	90×110 mm	10	DFW
548900200130	Glass	DIN13	SILVERED MIRROR	90×110 mm	10	DFW

#### LENSES 50 × 105 mm

#### **IR & UV PROTECTION**



Art. Nr.	Material	Shade	Color	Dimension	Qt.	Stock class
G100208	Polycarbona	ite Clear	Clear	50×105 mm	10	DFW
G100209	Glass	Clear	Clear	50×105 mm	100	DFW
G100210	Glass	DIN9	Green	50×105 mm	10	DFW
G100211	Glass	DIN10	Green	50×105 mm	10	DFW
G100212	Glass	DIN11	Green	50×105 mm	10	DFW
G100213	Glass	DIN12	Green	50×105 mm	10	DFW
G100214	Glass	DIN13	Green	50×105 mm	10	DFW

# LENSES 51 imes 108 mm (2" imes 41/4")



Art. Nr.	Material	Shade	Color	Dimension	Qt.	Stock class
55799	Polycarbona	te Clear	Clear	51×108 mm (2" × 41/4")	10	DFW
55700	Glass	Clear	Clear	51×108 mm (2" × 41/4")	10	DFW
55710	Glass	DIN10	Green	51×108 mm (2" × 41/4")	10	DFW
55711	Glass	DIN11	Green	51×108 mm (2" × 41/4")	10	DFW
55712	Glass	DIN12	Green	51×108 mm (2" × 41/4")	10	DFW

## LENSES 83 $\times$ 108 mm (3½" $\times$ 4½")





Art. Nr.	Material	Shade	Color	Dimension	Qt. Stock class
55699	Polycarbonate	e Clear	Clear	83×108 mm (3¼" × 4¼)	10 DFW



#### **FLEXER**



**FLEXER** is an extraordinary goggle with aggressive design and attention to detail. The curved profile with wraparound lenses provides extra coverage around the eyes and the extremely flexible frame fits the face without adjustments. Provided with anti-slip nose pad in soft rubber. Impact-resistant polycarbonate lenses. Easier to stow than normal goggles.

**ULTRAFLEXIBLE FRAME** 

- Optical class: 1
- Weight: 31 g

#### Antiscratch

- Antifog (mod. DIN 5)
- IR&UV Protection (mod. DIN 5)
- UV Protection (mod. CLEAR)
- PPE Category: II









Art.Nr.	Descr.	Standards	Qt.	Stock class
WP14028	FLEXER DIN5	EN 166, EN 169, EN 175	10	DFW
WP14029	FLEXER clear	EN 166, EN 170	10	DFW

#### **PANORAMIC**



**PANORAMIC** google has a wide field of view. This is the perfect solution for applications where front and side protection is required. High quality at an affordable price, ideal in a tough environment. Protection from the side screens.

- Optical class: 1
- Weight: 34 g
- Antiscratch
- IR&UV Protection (mod. DIN 5)
- UV Protection (mod. CLEAR)
- Adjustable in lenght and inclination (mod. DIN 5)
- PPE Category: II







Art.Nr.	Descr.	Standards	Qt.	Stock class
WP14021	PANORAMIC DIN5	EN 166, EN 169, EN 175	10	DFW
WP14022	PANORAMIC CLEAR	EN 166, EN 170	10	DFW

#### **VISUAL ROUND**



**VISUAL ROUND** combines comfort with practicality.

Equipped with tilting side shields with slits for ventilation.

The 50 mm round lenses made from glass are quickly replaceable by the screw on the top of the goggle.

- Optical class: 1
- Weight: 46 g
- Replaceable lenses diam. 50mm in glass
- Antiscratch
- IR&UV Protection
- PPE Category: II





Art.Nr.	Descr.	Standards	Qt.	Stock class
17008790	VISUAL ROUND DIN5	EN 166, EN 169, EN 175	5	DFW



#### **TRADITIONAL**



A traditional style google with lenses in glass for use in welding and grinding applications. Easy replacement of lenses by the screw in the centre of the goggle. Provided with tilting side protection against spatters with vertical slits for ventilation.

- Optical class: 2 (DIN 5)
- Weight: 54 g

Descr.

- Replaceable lenses in glass
- IR&UV Protection
- PPE Category: II



Stock class

Ot.

WP14048	TRADITIONAL DIN5	EN 166, EN 169, EN 175	1	DFW
SPARE PARTS				
Art.Nr.	Descr.		Qt.	Stock class
WP14052	1 pair Spare lenses DIN5		5	DFW

**Standards** 

#### **VISUAL SWIM**



**VISUAL SWIM** is a bocal style goggle with frame in aluminium with borders in soft rubber and equipped with side vents.

The 50mm round lenses made from glass are easy replaceable by screw-system. The excellent fit to the face is provided by the adjustable elastic headband.

- Optical class: 1
- Weight: 91 g
- Replaceable lenses diam. 50mm in glass
- Side vents



Descr.	Standards	Qt.	Stock class
VISUAL SWIM DIN5	EN 166, EN 169	1	DFW

#### **VISUAL FLIP METAL**



**VISUAL FLIP METAL** is a goggle equipped with a very resistant frame in aluminium with borders in soft rubber and with side vents. The lenses are made from of glass and can be replaced. The flip-up device allows quick switch of lenses for different applications.

- Weight: 109 g
- Replaceable lenses diam. 50mm in glass
- Side vents
- IR&UV Protection



Descr.	Standards	Qt.	Stock class
VISUAL FLIP METAL DIN5	EN 166, EN 169, EN 175	1	DFW

#### **VISUAL FLAME**



**VISUAL FLAME** is the classic flame cutting/welding goggle. The frame is made of soft and heat resistant PVC with vents and elastic headband. The lenses are made of glass and can be easily replaced.

Comfortable, light and inexpensive.

- Optical class: 1
- Weight: 64 g
- Replaceable lenses in glass
- Antiscratch
- IR&UV Protection (mod. DIN 5)
- PPE Category: II

 Art.Nr.
 Descr.
 Standards
 Qt.
 Stock class

 548914014011
 VISUAL FLAME DIN5
 EN 166, EN, 167, EN 168, EN 169, EN 175
 1
 DFW







#### **BOMBER**



Extraordinary goggle with curved and sporty design and side protection specifically designed to have the maximum view. Strong and wide legs and adjustable in length and inclination. Impact-resistant polycarbonate lenses.

- Optical class: 1
- Weight: 36 g
- Antiscratch
- **UV Protection**
- Adjustable in lenght and inclination
- PPE Category: II





Art.Nr.	Descr.	Standards	Qt.	Stock class
WP14061	Bomber TR clear	EN 166, EN 170	10	DFW

#### **PANORAMA**



**PANORAMA** is a goggle for protection against projection of particles. It can be uses in conjuction with prescription glasses.

 $Ideal\,for\,use\,where\,the\,goggle\,must\,be\,removed\,frequently.\,The\,big\,side\,vents\,offer\,maximum$ comfort even when worn for long time. Lenses are in polycarbonate.

- Optical class: 1
- Weight: 43 g
- UV Protection
- Side vents
- PPE Category: II



Art.Nr.	Descr.	Standards	Qt.	Stock class
17006500	PANORAMA CLEAR	EN 166, EN 170	10	DFW



**SKI** is a mask/goggle for professional use.

The indirect ventilation with air intakes keeps the mist formation to a minimum and allow protection against large dust particles, droplets and splashes of liquid.

The essential frame with the adjustable elastic headband is ideal for each type of fit and allows the use in conjustion with prescription glasses.

Lenses are in polycarbone.

- Optical class: 1
- Weight: 71 g
- Antiscratch
- Antifog
- PPE Category: II





Art.Nr.	Descr.	Standards	Qt.	Stock class
17004430	SKI CLEAR	EN166	10	DFW



#### **SKI FLIP**



**SKI FLIP** is a mask/goggle suitable for multiple operations without changing googles! Fitted with 4 vents (diam. 2,5mm) to avoid misting.

The soft nylon frame with elastic headband is fully adjustable to each type of fit.

The flip-up device allows quick switching from clear to shaded lenses.

Both framed lenses and flip-up lenses are in polycarbonate diameter 50 mm and are replaceable.

- Optical class: 1
- Weight: 133 g
- Replaceable lenses
- Antiscratch
- IR&UV Protection
- PPE Category: II

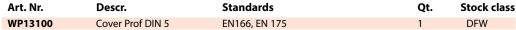






**COVER PROF** is a complete system to protect your head and eyes. It combines the practicality of a goggle with flip/up (clear + DIN5 lens) and a leather hood for head protection in an unique device. it provides protection for neck, throat, face and head while vents avoid lens misting. The lenses are replaceable.

- Optical class: 1
- Weight: 321 g
- Replaceable lenses
- Antiscrach
- IR&UV Protection
- PPE Category: II



#### **LENSES ROUND 50 MM**



Art. Nr.	Material	Shade	Color	Dimensions	Qt.	Stock class
548980000050	Glass	Clear	Clear	Diam. 50 mm	20	DFW
548980050102	Glass	DIN 4	Green	Diam. 50 mm	10	DFW
548980051042	Glass	DIN 5	Green	Diam. 50 mm	10	DFW
548980051043	Glass	DIN 6	Green	Diam. 50 mm	10	DFW
548980051044	Glass	DIN 7	Green	Diam. 50 mm	10	DFW
548980051045	Glass	DIN 8	Green	Diam. 50 mm	10	DFW
548980051046	Glass	DIN 9	Green	Diam. 50 mm	10	DFW
548980051047	Glass	DIN 10	Green	Diam. 50 mm	10	DFW
548980051048	Glass	DIN 11	Green	Diam. 50 mm	10	DFW







#### WORKWEAR

#### **JACKET CLASS**



The JACKET CLASS combines the good resistance and the high quality of Italian leather manufactured to obtain an extraordinary softness product, with a modern design and the maximum comfort.

The Jacket is equipped also with buttons protection flap with easy and quick Velcro closure (useful in case of emergency).

STANDARD: UNI EN ISO 11611

- PPE Category: II
- Made of bovine leather
- The back is made from a single piece, seamless
- Cuffs with elastic closure sewn from inside
- Micro-holes in the armpits for improved breathability
- Free of chemical dyes
- Free of substances toxic for humans



Art. Nr.	Descr.	Color	Size	Qt.	Stock class
WP13024	CLASS L	White	52/L	1	DFW
WP13026	CLASS XL	White	54/XL	Ĩ.	DFW
WP13027	CLASS XXL	White	56/XXL	1	DFW

#### **SLEEVES**

each product).

(one certificate copy included with



Supplied in pairs, these leather sleeves offer maximum protection for your arms from welding spatters.

This product must be used in conjunction with appropriate welding gloves. STANDARD: UNI EN ISO 11611

- PPE Category: II
- Made from two pieces of bovine leather
- Cuffs with elastic closure sewn from inside
- Free of chemical dyes
- Free of substances toxic for humans



#### **AVAILABLE IN TWO VERSIONS:**

**WITH ELASTICS** - quick and easy to put on and remove with stretch armbands. **WITH STRINGS** - professional version, longer and more protective for shoulders, with drawstrings that pass behind the neck assuring stable positioning during welding.

Art. Nr.	Descr.	Color	Size	Qt.	Stock class
WP13062	SLEEVES with ELASTICS (1 pair)	White	40×22 cm	1	DFW
WP13064	SLEEVES with STRINGCS (1 pair)	White	60×24 cm	1	DFW



#### **WORKWEAR**

#### **BALACLAVAS**

CE



Balaclava caps, produced from flame retardant cotton PROBAN, these offer good protection from sparks emitted from welding and grinding operations. The cotton PROBAN can be washed many times and still retain its characteristics, different from standard cotton that can loose its characteristics after 2 or 3 washes. STANDARD: UNI EN ISO 11611

• PPE Category: I

Art. Nr.	Descr.	Protection	Qt.	Stock class
12064	PRO	Head, throat	1	DFW
12068	TOTAL	Head, throat, neck, shoulders	1	DFW

## **APRONS**

CE



Leather apron to protect the body from welding spatters. STANDARD: UNI EN ISO 11611

- PPE Category: II
- · Made from a single piece of bovine leather, seamless
- Free of chemical dyes
- Free of substances toxic for humans



Art. Nr.	Descr.	Size	Color	Qt.	Stock class
12010	Apron SMALL	60×90 cm	White	1	DFW
12010L	Apron BIG	80×110 cm	White	1	DFW

#### **GAITERS**



Gaiters made from leather with quick connection for foot protection against welding spatters. STANDARD: UNI EN ISO 11611

- PPE Category: II
- Made of bovine leather
- Side closure with velcro and protective flap
- Strings for anchoring to shoes
- Free of chemical dyes
- Free of substances toxic for humans







#### **GLOVES**

#### MANUDOCK REINFORCED - (GENERAL PURPOSE GLOVES)



Five fingers protection gloves. Palm in cow split leather, back in cotton fabric.

- EN 420
- EN 388 (2 3 3 1)
- Dexterity Level 3



Art. Nr.	Descr.	Size	Qt.	Stock class
G100315	Manudock reinforced	10	12	DFW

#### **MECANO SOUPLE BIG – (GENERAL PURPOSE GLOVES)**



Five fingers protection gloves made from pig split leather.

- EN 420
- EN 388 (2 1 1 1)
- Dexterity Level 4



1 1 2						
Marie Control		Art. Nr.	Descr.	Size	Qt.	Stock class
The second of	1	G100313	Mécano Souple Big	10	12	DFW
A STATE OF	12 1900					

#### **MUJ-SOLO**



#### SOFT LEATHER GLOVE

MUJ-SOLO is one of the best glove when it comes to protection and comfort at work. No other glove offers such a combination of softness (by grain leather), durability (by the special type of leather) and the additional "heat protection" offered by the innovative insert.

This insert is specially treated to improve its insulation properties, offering enhanced safety to the operator. Invisible seams make the glove exceptionally comfortable and extremely elegant.

The prolonged cuff offers a high degree of protection to the lower arm.

Ideal for professional repetitive use, this glove is available in either right hand or left hand versions.

- PPE Category: II
- EN 420
- EN 388 (2 1 3 2)

SUITABLE FOR MIG WELDERS



Art. Nr.	Descr.	Size	Qt.	Stock class
548914013005	MUJ-SOLO for Right hand	10	1	DFW
548914013006	MUJ-SOLO for Left hand	10	1	DFW



#### **GLOVES**

#### **LUCIFER 150° – (GLOVES FOR WELDERS)**



Five fingers protection gloves for welders made from leather with full lining in cotton and covered seams. Length 35 cm.

EN 420

- EN 388 (2 1 4 3)
- EN 407 (3 1 3 x 3 x)
- EN 12477 Type A

Dexterity Level 3



EN 407

Descr.	Size	Qt.	Stock class
Lucifer 150°C	11	10	DFW

**SUITABLE FOR** 

MIG WELDERS

#### **SOUDARGON – (GLOVES FOR WELDERS)**



Five fingers protection gloves for welders made from cow split leather without lining.
• EN 420

**SUITABLE FOR** 

**TIG WELDERS** 

- EN 388 (2 1 2 3)
- EN 407 (4 1 x x 3 x)
- EN 12477 Type B
- Dexterity Level 4





Art. Nr. Size Descr. Qt. Stock class G100318 Soudargon 15cm DFW



NOTES	
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•
	•



NOTES

GCE Group is one of the world's leading companies in the field of gas control equipment. The headquarters are in Malmö, Sweden, and the two major supply units are located in Europe and Asia.

The company operates 18 subsidiaries around the world and employs more than 900 people. GCE Group includes four business areas – Cutting&Welding technology, Valves, Healthcare and Druva. Today's product portfolio corresponds to a large variety of applications, from single pressure regulators and blowpipes for cutting and welding to sophisticated gas supply systems for medical and electronics industry applications.

