

# 2024

LINE CATALOGUE









  
SOVICO (Monza Brianza)

  
SANDRIGO (Vicenza)



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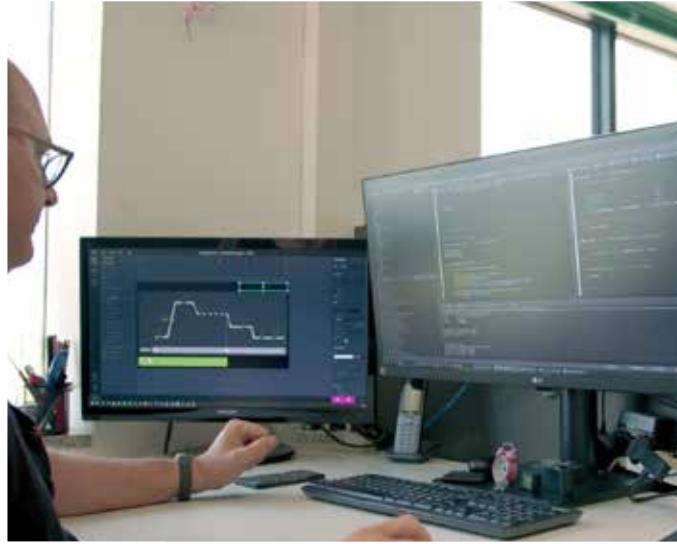


From 1975 to the present day, the story of **Helvi S.p.A.** is that of an Italian company with a strong international dimension, pursued throughout its growth, from its foundation to its entry into the **Beta Group**.

**Helvi S.p.A.** produces industrial welding machines, plasma cutting machines, professional battery chargers and accessories. The headquarter is in Sandrigo, in the province of Vicenza, and today employs more than 80 people, with a turnover of about 15 million euros developed more than 70 percent abroad.

In 2023 it became part of the **Beta Group**, Europe's leading manufacturer of tools and work equipment for specialists in mechanical engineering, industrial maintenance and auto repair.

Reliability is the key factor in our success: those who choose Helvi finds it in our people and in every welding machine, plasma cutting machine or professional battery charger. Every component is chosen and tested down to the smallest details, so that they combine perfectly in products designed to guarantee the best performance according to high quality standards.





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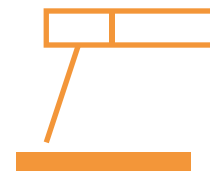
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# MMA / TIG LIFT



# ◦ MMA / TIG LIFT



	PART NUMBER	Part number BAG KIT	Part number BOX KIT	AMP MAX	INPUT VOLTAGE	ELECTRODE Ø MAX	CABLE CONNECT.	TIG
<b>SPARC 146</b>	99805991	-	99806001	120A	1ph 230V ± 10%	3,25 mm	25 mm <sup>2</sup>	
<b>SPARC 186</b>	99805992	99806012	99806002	160A	1ph 230V ± 10%	4 mm	25 mm <sup>2</sup>	
<b>SPARC 226</b>	99805993	99806013	99806003	200A	1ph 230V ± 10%	4 mm	25 mm <sup>2</sup>	
<b>GALILEO 179</b>	99806008	99806010	-	160A	1ph 230V ± 10%	4 mm	50 mm <sup>2</sup>	▪
<b>GALILEO 219</b>	99806009	99806011	-	200A	1ph 230V ± 10%	5 mm	50 mm <sup>2</sup>	▪



## MMA (ELECTRODE)

**HOT START** is an increased welding current value compare to the set value. This extra current will be delivered during the arc strike to facilitate it. This function allows arc strike without metallurgic defective on the welding joint, easy start and anti-sticking function. • **ARC-FORCE** it's an automatic welding current increase that is delivered when the arc, during the welding, is too short. Doing so we avoid electrode sticking, a better quality and semplicity of welding. Particularly useful in case of use of basic and cellulosic electrodes and during vertical welding). • **ANTI-STICKING**: this is an electronic function that control and reduces the welding current to a very low value in case of sticking electrode.



## TIG LIFT

**LIFT ARC START**: arc strike in LIFT mode. When the electrode touch the material to be welded, the current lift up to set value with a slop up value, avoiding to damage the electrode and to contaminate the welding bead. • **SLOPE UP**: the welding current reach the current set value at the select time. The slope up avoid to damage the electrode and to set a soft start on material to be welded. • **SLOP DOWN**: the welding current turn off at the set time. This allow the user to fill the crater that might form at the end of the welding bead. • **PULSE FREQUENCY**: in TIG Pulse mode, the user has the possibility to set the square wave frequency. It helps to reduce the heat transfer on the material to weld; to concentrate the weld seam and to have a higher penetration. • **POST GAS**: set time to allow the gas to protect and cool down the welding bead at the end of the process.

# SPARC RANGE



Easy-to-use welding inverter: great welding performance with all types of commercial electrodes (rutile, basic, stainless steel). Overvoltage, over temperature and anti-sticking control are included. As they are compact and lightweight, they are ideal for home/hobby applications.

	SPARC 146	SPARC 186	SPARC 226
<b>Input Voltage</b>	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
<b>Power 60%</b>	2,5 KW	2,5 KW	3,2 KW
<b>U<sub>o</sub></b>	70 V	70 V	70 V
<b>Amp. Min-Max</b>	10 ÷ 120 A	10 ÷ 160 A	20 ÷ 200 A
<b>Duty Cycle 40°C</b>	120A @ 25% 80A @ 50% 60A @ 100%	160A @ 25% 100A @ 60% 80A @ 100%	200A @ 25% 130A @ 60% 100A @ 100%
<b>Ø Electrode</b>	1,6 ÷ 3,25 mm	1,6 ÷ 4,0 mm	1,6 ÷ 4,0 mm
<b>Electrode type</b>	6013 - 7018	6013 - 7018	6013 - 7018
<b>Insulation</b>	H	H	H
<b>Protection degree</b>	IP22S	IP22S	IP22S
<b>Dimens. (LxWxH)</b>	120x285x255 mm	120x285x255 mm	120x285x255 mm
<b>Weight box/net</b>	3,5 / 4,0 Kg	3,7 / 4,2 Kg	3,9 / 4,4 Kg
<b>Power source part number</b>	99805991	99805992	99805993
<b>Dim. in carrton box</b>	245x385x235 mm	245x385x235 mm	245x385x235 mm
<b>Weight in carton box</b>	5,4 / 4,9 Kg	6,4 / 5,9 Kg	7,6 / 7,0 Kg
<b>Kit Carton box part number</b>	99806001	99806002	99806003
<b>Dim. in Helvi Bag M</b>	-	300x530x345 mm	300x530x345 mm
<b>Weight in Helvi Bag M</b>	-	8,2 / 7,4 Kg	8,6 / 7,8 Kg
<b>KIT Helvi Bag M part number</b>	-	99806012	99806013





## HELVI KIT CONFIGURATION



CARTON BOX



HELVI BAG

SPARC 146 CARTON BOX KIT · 99806001		SPARC 186 CARTON BOX KIT · 99806002		SPARC 226 CARTON BOX KIT · 99806003	
99805991	Power source · Sparc 146	99805992	Power source · Sparc 186	99805993	Power source · Sparc 226
43210238	Ground cable · 10mm <sup>2</sup> · 1,6 m	43210229	Ground cable · 16mm <sup>2</sup> · 2 m	43210236	Ground cable · 16mm <sup>2</sup> · 2 m
43205118	Welding cable · 10mm <sup>2</sup> · 2,4 m	43205114	Welding cable · 16mm <sup>2</sup> · 3 m	43205114	Welding cable · 16mm <sup>2</sup> · 3 m
21905064	Welding mask · Glass 75x98 mm	21905064	Welding mask · Glass 75x98 mm	21905064	Welding mask · Glass 75x98 mm
44900001	Glass KIT	44900001	Glass KIT	44900001	Glass KIT
21905039	Hammer/brush	21905039	Hammer/brush	21905039	Hammer/brush



WELDING KIT

SPARC 186 HELVI BAG KIT · 99806012		SPARC 226 HELVI BAG KIT · 99806013	
99805992	Power source · Sparc 186	99805993	Power source · Sparc 226
43210229	Ground cable · 16mm <sup>2</sup> · 2 m	43210236	Ground cable · 16mm <sup>2</sup> · 2 m
43205114	Welding cable · 16mm <sup>2</sup> · 3 m	43205114	Welding cable · 16mm <sup>2</sup> · 3 m
21905039	Hammer/brush	21905039	Hammer/brush
21905178K	Helvi BAG M · 450x220x270 mm	21905178K	Helvi BAG M · 450x220x270 mm

## CONTROL PANEL



- 1 Ampere adjustment scale
- 2 Adjustment scale for electrode diameter
- 3 Regulation Knob
- 4 Electrodes diameter legend to facilitate the settings
- 5 Thermic protection LED
- 6 Power LED

<b>GALILEO 179</b>	
<b>Input Voltage</b>	(1ph) 230V ± 10% · 50/60Hz
<b>Power 60%</b>	4,8 KW
<b>U<sub>o</sub></b>	52 V
<b>Amp. Min-Max</b>	10 ÷ 160 A
<b>Duty Cycle 40°C</b>	160A @ 60% 130A @ 100%
<b>Ø Electrode</b>	1,6 ÷ 4 mm
<b>Electrode type</b>	6013 - 7018
<b>Insulation</b>	H
<b>Protection degree</b>	IP23S
<b>Dimens. (LxWxH)</b>	140x360x255 mm
<b>Box (LxWxH)</b>	175x510x290 mm
<b>Weight box/net</b>	7,0 / 6,4 Kg
<b>Power source part number</b>	99806008
<b>Dim. in Helvi Bag M</b>	300x530x345 mm
<b>Weight in Helvi Bag M</b>	12,2 / 11,1 Kg
<b>KIT Helvi Bag part number</b>	99806010

Easy-to-use welding inverters: great welding performance with all types of commercial electrodes (rutile, basic, stainless steel). They fit overvoltage, over temperature and anti-sticking control. Equipped with STICK/TIG (lift arc) selector. They can be connected to power sources and long connection lines. Ideal for maintenance jobs and workshops applications.



<b>INCLUDED WITH BAG KIT · 99806010</b>	
<b>Power source</b>	99806008 · Galileo 179
<b>Ground cable</b>	43210170 · 25mm <sup>2</sup> · 2m
<b>Welding cable</b>	43205097 · 25mm <sup>2</sup> · 3m
<b>Helvi Bag M</b>	21905178K · 450x220x270 mm

<b>OPTIONAL · KIT CABLES 25mm<sup>2</sup></b>	
<b>99900278</b>	<b>Ground cable 43210170</b> · 25mm <sup>2</sup> · 2m
	<b>Welding cable 43205097</b> · 25mm <sup>2</sup> · 3m

<b>GALILEO 219</b>	
<b>Input Voltage</b>	(1ph) 230V ± 10% · 50/60Hz
<b>Power 60%</b>	6 KW
<b>U<sub>o</sub></b>	48 V
<b>Amp. Min-Max</b>	10 ÷ 200 A
<b>Duty Cycle 40°C</b>	200A @ 60% 155A @ 100%
<b>Ø Electrode</b>	1,6 ÷ 5 mm
<b>Electrode type</b>	6013 - 7018
<b>Insulation</b>	H
<b>Protection degree</b>	IP23S
<b>Dimens. (LxWxH)</b>	140x360x255 mm
<b>Box (LxWxH)</b>	175x510x290 mm
<b>Weight box/net</b>	7,4 / 6,8 Kg
<b>Power source part number</b>	99806009
<b>Dim. in Helvi Bag M</b>	300x530x345 mm
<b>Weight in Helvi Bag M</b>	12,6 / 11,5 Kg
<b>KIT Helvi Bag part number</b>	99806011

Easy-to-use welding inverters: great welding performance with all types of commercial electrodes (rutile, basic, stainless steel). They fit overvoltage, over temperature and anti-sticking control. Equipped with STICK/TIG (lift arc) selector. They can be connected to power sources and long connection lines. Ideal for maintenance jobs and workshops applications.



<b>INCLUDED WITH BAG KIT · 99806011</b>	
<b>Power source</b>	99806009 · Galileo 219
<b>Ground cable</b>	43210170 · 25mm <sup>2</sup> · 2m
<b>Welding cable</b>	43205097 · 25mm <sup>2</sup> · 3m
<b>Helvi Bag M</b>	21905178K · 450x220x270 mm

<b>OPTIONAL · KIT CABLES 25mm<sup>2</sup></b>	
<b>99900278</b>	<b>Ground cable 43210170</b> · 25mm <sup>2</sup> · 2m
	<b>Welding cable 43205097</b> · 25mm <sup>2</sup> · 3m







**TIG DC HF · TIG AC/DC HF**



# ○ TIG DC HF · TIG AC/DC HF



	PART NUMBER	KIT PART NUMBER	AMP MAX	INPUT VOLTAGE	MAX Ø ELECTRODE	CABLE CONNECT.	TIG DC	TIG AC
<b>GALILEO TIG 219 HF</b>	99806005	99806007	<b>200A</b>	1ph <b>230V ± 10%</b>	-	<b>50 mm<sup>2</sup></b>	▪	-
<b>GALILEO TIG 211 EASY AC/DC</b>	99806020	99806020K	<b>200A</b>	1ph <b>110/230V ± 10%</b>	<b>5 mm</b>	<b>50 mm<sup>2</sup></b>	▪	▪



## TIG DC HF · TIG AC/DC HF

### HF (High Frequency) ARC START

Arc strike ignition HF mode. The electric arc is activated remotely by the HF system. It's not required to touch the material to be welded. In this way you avoid to damage the electrode and to contaminate the welding bead.

### TIG AC/DC

In order to weld aluminum alloys we need a TIG power source able to generate an AC current. These alloys creates a layer of aluminum oxide which needs to be broken. We can obtain this results thanks to the polarity change (for a half-period the current breaks the layer of oxide and for the other half-period the current heat the piece to be welded, which allows the fusion and the welding).

TIG AC/DC power source, other than the above mentioned funcions, allows the user to set the following parameters:

- **AC FREQUENCY:** allows to narrow or to enlarge the electric arc (welding bead) changing the frequency from a maximum value to a mininum value (High frequency: narrow arc / low frequency: larger arc).
- **AC BALANCE:** allows to have more or less cleaning action and therefore to have more or less heat transfer on the piece to be welded. More balance value improve the heat transfer. Conversely a lower balance value increase the cleaning action.

**GALILEO TIG 219 HF**

<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz	
	<b>TIG</b>	<b>MMA</b>
<b>Power 60%</b>	4,2 KW	5,3 KW
<b>U<sub>0</sub></b>	64 V	64 V
<b>Amp. Min-Max</b>	5 ÷ 200 A	5 ÷ 160 A
<b>Duty Cycle 40°C</b>	200A @ 20% 115A @ 60% 90A @ 100%	160A @ 20% 95A @ 60% 75A @ 100%
<b>Ø Electrode</b>	-	1,6 ÷ 4 mm
<b>Electrode type</b>	-	6013 - 7018
<b>Insulation</b>	H	
<b>Protection degree</b>	IP23S	
<b>Dimensions (LxWxH)</b>	140x400x245 mm	
<b>Box (LxWxH)</b>	175x510x290 mm	
<b>Weight box/net</b>	8,8 / 8,2 Kg	
<b>Power source part number</b>	99806005	
<b>Dim. in Helvi Bag</b>	300x620x325 mm	
<b>Weight in Helvi Bag M</b>	15,8 / 14,7 Kg	
<b>KIT part number</b>	99806007	

Inverter power sources designed to meet the needs of the most demanding users. Easy-to-use both in STICK welding and TIG welding with HF start. Model 219HF: all main welding parameters can be adjusted by the user: in TIG welding, 2stroke or 4stroke mode, pre-gas, up-slope time, pulsation frequency, basic current, down-slope time, crater filler current, post-gas; in STICK welding Hot Start and Arc Force are adjustable. Equipped with digital ammeter which shows welding current and preset parameters. Model 201HF is equipped with an user friendly front panel where you can select 2T/4T, Tig slope down, MMA arc force.


**INCLUDED WITH BAG KIT · 99806007**

<b>Power source</b>	99806005 · Galileo TIG 219 HF
<b>TIG torch Ergotig 26</b>	23020157 · 50mm <sup>2</sup> · 4m · 3 pin
<b>Ground cable</b>	43210170 · 25mm <sup>2</sup> · 2m
<b>Gas hose KIT</b>	30900030 · 2m
<b>TIG welding gloves</b>	21905133 T010 · Size 10
<b>Helvi Bag XL</b>	21905139K · 540x225x250 mm





**GALILEO TIG 211 EASY AC/DC**

Input voltage	(1ph) 110V ± 10% · 50/60Hz		(1ph) 230V ± 10% · 50/60Hz			
	TIG		MMA	TIG		MMA
	DC	AC	DC	DC	AC	DC
Power 60%	2 KW	2 KW	2,2 KW	2,3 KW	2,5 KW	4 KW
U <sub>o</sub>	45 V	45 V	45 V	45 V	45 V	45 V
Amp. Min-Max	5 ÷ 140 A	10 ÷ 140 A	5 ÷ 100 A	5 ÷ 200 A	10 ÷ 200 A	5 ÷ 170 A
Duty Cycle 40°C	140A 40%	140A 40%	100A 35%	200A 25%	200A 30%	170A 30%
	110A 60%	110A 60%	75A 60%	130A 60%	140A 60%	120A 60%
	85A 100%	85A 100%	60A 100%	100A 100%	110A 100%	90A 100%
Ø Electrode	-	-	1,6 ÷ 2,5 mm	-	-	1,6 ÷ 5 mm
Electrode type	-	-	6013 - 7018	-	-	6013 - 7018
Insulation	H					
Protection degree	IP23S					
Dimensions (LxWxH)	195x490x395 mm					
Box (LxWxH)	300x640x455 mm					
Weight box/net	12,0 / 11,2 Kg					
Power source part number	99806020					
Dim. in Box KIT	340x630x460 mm					
Weight in Box KIT	21,2 / 19,6 Kg					
Box KIT part number	99806020K					

Inverter Power generator single-phase designed for AC TIG aluminium welding and DC TIG welding for steel. Arc striking with HF or LIFT ARC mode. MMA mode also available. Thanks to the inverter technology and microprocessors, the welding process is controlled at all times, guaranteeing excellent welding dynamics and optimal arc ignition. Thanks to the FLEX-LINE function, the device automatically recognizes the value of the input power supply (110V or 220V). Equipped with the PFC function, which ensures high efficiency of the unit and allows to weld with high currents and low consumptions. The COMPACT EASY 211 AC/DC is equipped with an easy-to-use and intuitive control panel. 3 welding modes available: TIG AC, TIG DC e STICK (MMA).



**INCLUDED WITH KIT VERSION · 99806020K**

POWER SOURCE	99806020 · Galileo TIG 211 Easy AC/DC
TIG torch	23020410 · Tig 26 · 4m · 50mm <sup>2</sup> · 12 pins
Ground cable	43210170 · 25mm <sup>2</sup> · 2m
Gas hose KIT	30900030 · 2m

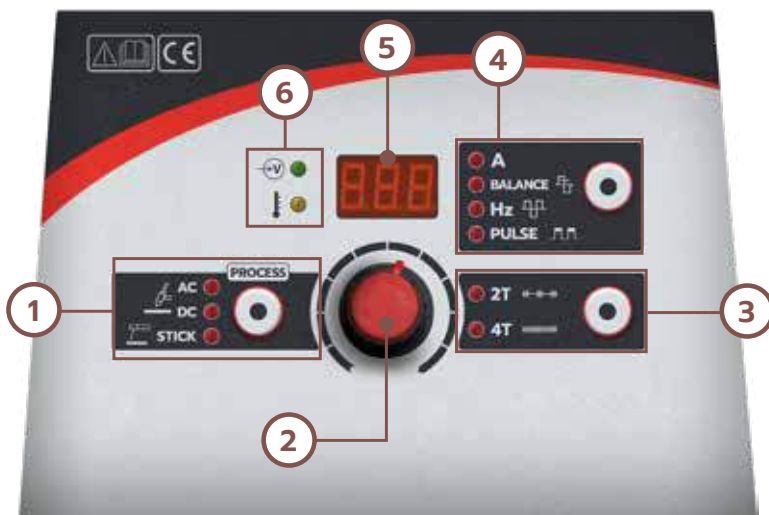
**INCLUDED**

Connector	22105166 · 12 pin · Male (for TIG torch)
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**OPTIONAL**

TIG torch TIG 26	23020410 · 12 pin · 4m
Trolley	99900258
Foot remote control	99810021 · 12 pin · 5m

**CONTROL PANEL**



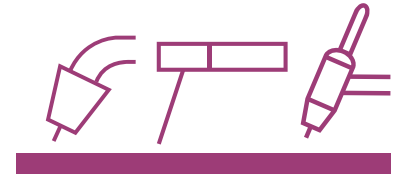
- 1 TIG AC / TIG DC / MMA Selection
- 2 Regulation knob
- 3 2T/4T selection
- 4 TIG Parameters adjustment: AC Balance · AC Frequency · Pulse
- 5 Digital Display. Before welding: shows pre-set value. During welding: shows welding current.
- 6 LED: Power · thermal protection · over current



**MULTIPROCESS**



# MULTIPROCESS



	PART NUMBER	AMP MAX	INPUT VOLTAGE	WIRE SPOOL	GAS / NO GAS	TORCH CONNECT.	WIRE FEEDER TYPE
<b>MINI FOX 161</b>	99820060	<b>150A</b>	1ph 230V ± 10%	1 Kg	▪	Direct	2 rolls
<b>FOX 165</b>	99820050	<b>150A</b>	1ph 230V ± 10%	1 + 5 Kg	▪	Direct	2 rolls
<b>FOX 185</b>	99820039A	<b>170A</b>	1ph 115/230V	1 + 5 Kg	▪	Euro connection	2 rolls metallic
<b>FOX 191</b>	99820052	<b>180A</b>	1ph 230V ± 10%	1 + 5 Kg	▪	Euro connection	2 rolls
<b>FOX 211</b>	99820053A	<b>200A</b>	1ph 230V ± 10%	1 + 5 Kg	▪	Euro connection	2 rolls metallic
<b>PUMA 191</b>	99820065	<b>180A</b>	1ph 230V ± 10%	5 + 15 Kg	▪	Euro connection	2 rolls metallic
<b>+ KIT</b>	99820065K						
<b>PUMA 256</b>	99820061	<b>250A</b>	1ph 230V ± 10%	5 + 15 Kg	▪	Euro connection	2 rolls metallic
<b>+ KIT</b>	99820061K						
<b>PUMA 278</b>	99825017A	<b>250A</b>	3ph 400V ± 10%	5 + 15 Kg	▪	Euro connection	4 rolls metallic
<b>+ KIT</b>	99825017KA						
<b>PUMA 298</b>	99825016	<b>290A</b>	3ph 400V ± 10%	5 + 15 Kg	▪	Euro connection	4 rolls metallic
<b>+ KIT</b>	99825016K						

# ACCESSORIES FOR THE FOX RANGE

## OPTIONAL "EASY GAS"

	<b>22905118</b>	Pressure regulator Micro 130 bar - no manometer
	<b>04600404</b>	Gas bottle plastic support
	<b>21900001</b>	Disposable gas bottles CO <sub>2</sub>
	<b>21900002</b>	Disposable gas bottles Argon
	<b>21900003</b>	Disposable gas bottles Argon CO <sub>2</sub>
	<b>99900171A</b>	Trolley

## OPTIONAL "FULL GAS"

<b>99900258</b>	Trolley HD AIR





### mini FOX 161

Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power 60%	2 KW
U <sub>0</sub>	26 V
Amp Min-Max	10 ÷ 150 A
Duty cycle 40°C	150A @ 20% 90A @ 60% 70A @ 100%
Steel	0,8 Ø mm
Flux core	0,9 Ø mm
Insulation	H
Protection degree	IP22S
Dimensions (LxWxH)	190x370x335 mm
Box (LxWxH)	250x580x355 mm
Weight gross/net	10,0 / 9,2 Kg
Part number	99820060



#### INCLUDED

MIG torch (fixed)	23000142K · 10mm <sup>2</sup> · 2m
Ground cable	43210234 · 10mm <sup>2</sup> · 2m
Flux core wire spool	21910116 · 0,5 Kg · Ø 0,9mm
Gas hose KIT	30900030 · 2m
Drive roll	33805074 Ø 25 mm · 0,6 ÷ 0,8/0,9 mm Knurled
Hammer-brush	21905039

### FOX 165

Input voltage	(1ph) 230V ± 10% · 50/60Hz	
Power 60%	1,9 KVA	
	MIG	MMA
U <sub>0</sub>	70 V	70 V
Amp Min-Max	25 ÷ 150 A	20 ÷ 150 A
Duty cycle 40°C	150A @ 25% 95A @ 60% 75A @ 100%	150A @ 20% 85A @ 60% 65A @ 100%
Steel	0,8 Ø mm	-
Flux core	0,9 Ø mm	-
Ø Electrode	-	1,6 ÷ 3,25 Ø mm
Electrode type	-	6013 - 7018 - CrNi
Insulation	H	
Protection degree	IP22S	
Dimensions (LxWxH)	220x480x385 mm	
Box (LxWxH)	260x590x435 mm	
Weight gross/net	12,0 / 10,5 Kg	
Part number	99820050	



#### INCLUDED

MIG torch	23000132 · 10mm <sup>2</sup> · 2,7m
Ground cable	43210229 · 16mm <sup>2</sup> · 2m
Flux core wire spool	21910116 · 0,5 Kg · Ø 0,9 mm
Drive roll	33805074 Ø 25 mm · 0,6 ÷ 0,8/0,9 mm Knurled
Gas hose KIT	30900030 · 2m

#### OPTIONAL

Trolley	99900171A
MMA Welding cable	43205028K · 16mm <sup>2</sup> · 3,0m



**FOX 185**

<b>Input voltage</b>	(1ph) 115V · 50/60Hz		(1ph) 230V · 50/60Hz			
<b>Power 60%</b>	1,9 KVA		2,8 KVA			
	<b>MIG</b>	<b>MMA</b>	<b>TIG</b>	<b>MIG</b>	<b>MMA</b>	<b>TIG</b>
<b>U<sub>0</sub></b>	60 V	80 V	9,5 V	60 V	80 V	9,5 V
<b>Amp Min-Max</b>	25 ÷ 120 A	20 ÷ 100 A	5 ÷ 110 A	25 ÷ 170 A	20 ÷ 170 A	5 ÷ 170 A
<b>Duty cycle 40°C</b>	120A 40% 100A 60% 75A 100%	100A 40% 85A 60% 65A 100%	110A 40% 90A 60% 70A 100%	170A 25% 110A 60% 85A 100%	170A 25% 110A 60% 85A 100%	170A 25% 110A 60% 85A 100%
<b>Steel</b>	0,6 ÷ 0,8 Ø mm					
<b>Stainless steel</b>	0,8 Ø mm					
<b>Aluminium</b>	0,8 ÷ 1,0 Ø mm					
<b>Flux core</b>	0,9 Ø mm					
<b>CuSi<sub>3</sub></b>	0,8 Ø mm					
<b>Ø Electrode</b>	1,6 ÷ 3,25 Ø mm					
<b>Electrode type</b>	6013 - 7018 - CrNi					
<b>Insulatin</b>	H					
<b>Protect. degree</b>	IP22S					
<b>Dim. (LxWxH)</b>	220x480x385 mm					
<b>Box (LxWxH)</b>	260x590x435 mm					
<b>Weight gross/net</b>	16 / 12 Kg					
<b>Part number</b>	99820039A					


**INCLUDED**

<b>MIG torch</b>	23000491 · Euro connection · 3m
<b>Ground cable</b>	43210138 · 16mm <sup>2</sup> · 2m
<b>Steel wire spool</b>	21910108 · 1 Kg · Ø 0,8mm
<b>Drive roll</b>	33805003 · Ø 30 mm · 0,6 ÷ 0,8 mm
<b>Gas hose KIT</b>	30900030 · 2m

**OPTIONAL**

<b>Trolley</b>	99900171A
<b>MMA welding cable</b>	43205028K · 16mm <sup>2</sup> · 3m
<b>TIG torch</b>	23020173 · Tig 17V


**FOX 191**

<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz		
	<b>MIG</b>	<b>MMA</b>	<b>TIG</b>
<b>Power 60%</b>	2,4 KW	2,8 KW	2,2 KW
<b>U<sub>0</sub></b>	70 V	70 V	70 V
<b>Amp Min-Max</b>	25 ÷ 180 A	20 ÷ 180 A	5 ÷ 180 A
<b>Duty cycle 40°C</b>	180A @ 20% 105A @ 60% 75A @ 100%	180A @ 20% 105A @ 60% 75A @ 100%	180A @ 20% 105A @ 60% 75A @ 100%
<b>Steel</b>	0,6 ÷ 1,0 Ø mm	-	-
<b>Stainless steel</b>	0,8 ÷ 1,0 Ø mm	-	-
<b>Aluminium</b>	0,8 ÷ 1,0 Ø mm	-	-
<b>Flux core</b>	0,9 Ø mm	-	-
<b>Ø Electrode</b>	-	1,6 ÷ 4,0 Ø mm	-
<b>Electrode type</b>	-	6013 - 7018 - CrNi	-
<b>Insulatin</b>	H		
<b>Protection degree</b>	IP22S		
<b>Dimensions (LxWxH)</b>	220x480x385 mm		
<b>Box (LxWxH)</b>	260x590x435 mm		
<b>Weight gross/net</b>	12,5 / 10,5 Kg		
<b>Part number</b>	99820052		


**NEW**
**INCLUDED**

<b>MIG torch</b>	23000491 · Euro connection · 3m
<b>Ground cable</b>	43210138 · 16mm <sup>2</sup> · 2m
<b>Flux core wire spool</b>	21910116 · 0,5 Kg · Ø 0,9mm
<b>Drive roll</b>	33805023 · Ø 30 mm · 0,6 ÷ 0,8/0,9 mm
<b>Gas hose KIT</b>	30900030 · 2m

**OPTIONAL**

<b>Trolley</b>	99900171A
<b>MMA welding cable</b>	43205028K · 16mm <sup>2</sup> · 3m





**FOX 211**

Input voltage	(1ph) 230V ± 10% · 50/60Hz		
Power 60%	5,5 KVA		
	<b>MIG</b>	<b>MMA</b>	<b>TIG</b>
U <sub>0</sub>	35 V	65 V	65 V
Amp Min-Max	20 ÷ 200 A	5 ÷ 200 A	5 ÷ 200 A
Duty cycle 40°C	200A @ 35% 160A @ 60% 140A @ 100%	200A @ 35% 150A @ 60% 120A @ 100%	200A @ 35% 150A @ 60% 120A @ 100%
Steel	0,6 ÷ 1,0 Ø mm	-	-
Stainless steel	0,8 Ø mm	-	-
Aluminium	0,8 ÷ 1,0 Ø mm	-	-
Flux core	0,9 Ø mm	-	-
CuSi <sub>3</sub>	0,8 Ø mm	-	-
Ø Electrode	-	1,6 ÷ 5,0 Ø mm	-
Electrode type	-	6013 - 7018 - CrNi	-
Insulatin	H		
Protection degree	IP22S		
Dimensions (LxWxH)	220x520x385 mm		
Box (LxWxH)	260x640x435 mm		
Weight gross/net	23 / 19 Kg		
Part number	99820053A		



**INCLUDED**

MIG torch	23000494 · ErgoPlus 25 · 3m
Ground cable	43210132 · 25mm <sup>2</sup> · 3m
Drive roll	33805101 · Ø 30 mm · 0,8 ÷ 1,0 mm
Gas hose KIT	30900030 · 2m

**OPTIONAL**

Trolley	99900171A
TIG torch	23020199 · TIG 26V · 4m
MMA welding cable	43205049K · 16mm <sup>2</sup> · 3m



**PUMA 191**

Input voltage	(1ph) 230V ± 10% · 50/60Hz		
Power 60%	2,3 KVA		
	MIG	MMA	TIG
U <sub>0</sub>	70 V	70 V	70 V
Amp Min-Max	25 ÷ 180 A	20 ÷ 180 A	5 ÷ 180 A
Duty cycle 40°C	180A @ 20% 105A @ 60% 75A @ 100%	180A @ 20% 105A @ 60% 75A @ 100%	180A @ 20% 105A @ 60% 75A @ 100%
Steel	0,9 Ø mm	-	-
Stainless steel	0,6 ÷ 0,8 Ø mm	-	-
Aluminium	0,8 ÷ 1,0 Ø mm	-	-
Flux core	0,8 Ø mm	-	-
CuSi <sub>2</sub>	0,8 Ø mm	-	-
Ø Electrode	-	1,6 ÷ 3,25 Ø mm	-
Electrode type	-	6013 - 7018 - CrNi	-
Insulatin	H		
Protection degree	IP22S		
Dimensions (LxWxH)	460x770x660 mm		
Box (LxWxH)	360x795x530 mm		
Weight gross/net	37 / 33 Kg		
Power source part number	99820065		
KIT part number	99820065K		

**NEW**

**INCLUDED WITH KIT VERSION · 99820065K**

Power source	99820065 · Puma 191 (No accessories)
MIG torch	23000491 · Euro connection · 3m
Ground cable	43210138 · 16mm <sup>2</sup> · 2m
Drive roll	33805003 · Ø 30 mm · 0,6 ÷ 0,8 mm

**OPTIONAL**

TIG torch	23020173 · 17V · 4m
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**PUMA 256**

Input voltage	(1ph) 230V ± 10% · 50/60Hz		
Power 60%	5,6 KW	5,6 KW	5,6 KW
U <sub>0</sub>	30 V	56 V	10 V
Amp Min-Max	30 ÷ 250A	20 ÷ 200 A	10 ÷ 250 A
Duty cycle 40°C	250A @ 30% 190A @ 60% 170A @ 30%	200A @ 30% 170A @ 60% 150A @ 100%	250A @ 30% 190A @ 60% 170A @ 100%
Steel	0,8 ÷ 1,0 Ø mm		
Stainless steel	0,8 ÷ 1,0 Ø mm		
Aluminium	1,0 ÷ 1,2 Ø mm		
Flux core	1,0 ÷ 1,2 Ø mm		
CuSi <sub>2</sub>	0,8 Ø mm		
Ø Electrode	1,6 ÷ 4 Ø mm		
Electrode type	6013 rutile - 7018 basic		
Insulatin	H		
Protection degree	IP23S		
Dimensions (LxWxH)	450x840x710 mm		
Box (LxWxH)	365x895x650 mm		
Weight gross/net	32 / 30 Kg		
Power source part number	99820061		
KIT part number	99820061K		


**INCLUDED WITH KIT VERSION · 99820061K**

Power source	99820061 · Puma 256 (No accessories)
MIG torch	23000494 · ErgoPlus MIG 25 · 3m
Ground cable	43210253 · 25mm <sup>2</sup> · 3m
Pressure regulator	22905049 · mini CO <sub>2</sub> /Argon · 2 manometers
Adaptor for gas bottle	22910014

**OPTIONAL**

TIG torch	23020154 · 26V · 4m
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**PUMA 278**

Input voltage	(3ph) 400V ± 10% · 50/60Hz
	<b>MIG</b>
Power 60%	4,8 KW
U <sub>0</sub>	30 V
Amp Min-Max	30 ÷ 250A
Duty cycle 40°C	250A @ 35% 190A @ 60% 150A @ 100%
Steel	0,8 ÷ 1,0 Ø mm
Stainless steel	0,8 ÷ 1,0 Ø mm
Aluminium	1,0 ÷ 1,2 Ø mm
Flux core	1,0 ÷ 1,2 Ø mm
CuSi <sub>3</sub>	0,8 Ø mm
Insulatin	H
Protection degree	IP23S
Dimensions (LxWxH)	450x840x710 mm
Box (LxWxH)	365x895x650 mm
Weight gross/net	32 / 30 Kg
Power source part number	99825017A
KIT part number	99825017KA



**INCLUDED WITH KIT VERSION · 99825017KA**

Power source	99825017A · Puma 278 (No accessories)
MIG torch	23000494 · ErgoPlus MIG 25 · 3m
Ground cable	43210253 · 25mm <sup>2</sup> · 3m
Pressure regulator	22905049 · mini CO <sub>2</sub> /Argon · 2 manometers
Adaptor for gas bottle	22910014



**PUMA 298**

Input voltage	(3ph) 400V ± 10% · 50/60Hz		
	<b>MIG</b>	<b>MMA solo rutile</b>	<b>TIG</b>
Power 60%	6 KW	6 KW	5,8 KW
U <sub>0</sub>	35 V	54 V	54 V
Amp Min-Max	30 ÷ 290A	20 ÷ 250 A	10 ÷ 290 A
Duty cycle 40°C	290A @ 35% 220A @ 60% 170A @ 100%	250A @ 35% 190A @ 60% 150A @ 100%	290A @ 35% 220A @ 60% 170A @ 100%
Steel	0,8 ÷ 1,0 Ø mm		
Stainless steel	0,8 ÷ 1,0 Ø mm		
Aluminium	1,0 ÷ 1,2 Ø mm		
Flux core	1,0 ÷ 1,2 Ø mm		
CuSi <sub>3</sub>	0,8 Ø mm		
Ø Electrode	1,6 ÷ 5 Ø mm		
Electrode type	6013 rutile		
Insulatin	H		
Protection degree	IP23S		
Dimensions (LxWxH)	450x840x710 mm		
Box (LxWxH)	365x895x650 mm		
Weight gross/net	37 / 35 Kg		
Power source part number	99825016		
KIT part number	99825016K		



**INCLUDED WITH KIT VERSION · 99825016K**

Power source	99825016 · Puma 298 (No accessories)
MIG torch	23000494 · ErgoPlus MIG 25 · 3m
Ground cable	43210254 · 35mm <sup>2</sup> · 3m
Pressure regulator	22905049 · mini CO <sub>2</sub> /Argon · 2 manometers
Adaptor for gas bottle	22910014

**OPTIONAL**

TIG torch	23020154 · 26V · 4m
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# PLASMA CUTTING

# ◦ PLASMA CUTTING



	PART NUMBER	AMP MAX	INPUT VOLTAGE	COMPRESSOR	MAX CUT / SEVERANCE
PC 33	99830024	30A	1ph 230V ± 10%	-	10 mm
PC 43	99830019	40A	1ph 230V ± 10%	-	15 mm
COMBI PC 302K	99830015	30A	1ph 230V ± 10%	▪	10 mm



<b>PC 33</b>	
<b>Plasma torch</b>	<b>PT40</b>
<b>Input voltage</b>	(1ph) <b>230V ± 10% · 50/60Hz</b>
<b>Power 60%</b>	<b>2,8 KVA</b>
<b>U<sub>o</sub></b>	<b>310 V</b>
<b>Amp Min-Max</b>	<b>12 ÷ 28 A</b>
<b>Duty cycle 40°C</b>	<b>28A @ 30%</b> <b>12A @ 100%</b>
<b>Severance</b>	<b>10 mm</b>
<b>Quality cutting</b>	<b>8 mm</b>
<b>Air pressure</b>	<b>4 - 5 bar</b>
<b>Air capacity</b>	<b>100 l/min</b>
<b>Insulation</b>	<b>H</b>
<b>Protection degree</b>	<b>IP22S</b>
<b>Dimensions (LxWxH)</b>	<b>155x430x320 mm</b>
<b>Box (LxWxH)</b>	<b>260x560x355 mm</b>
<b>Weight gross/net</b>	<b>10,6 / 9,7 kg</b>
<b>Part number</b>	<b>99830024</b>

The Plasma, based on Inverter technology, guarantees accurate and clean plasma cut up to 13mm thickness. Easy to handle and operate, this system is suitable for cutting thin materials at high speed. The front panel is provided with clear and simple graphics for the adjustment of the cutting current and to indicate the intervention of any of the internal safety devices. Extra operator protection is provided by a special Start system. It is well suited for auto body repair shops, air conditioning systems and general plate working.


**INCLUDED**

<b>Plasma torch</b>	<b>23010070 · PT40 · 4m</b>
<b>Ground cable</b>	<b>43210150 · 6mm<sup>2</sup> · 4m</b>

**CONSUMABLE KIT INCLUDED**

<b>Contact tip</b>	<b>23015186 · Ø 0,8 mm · 20-30A</b>
<b>Contact tip</b>	<b>23015189 · Ø 0,65 mm · 10-20A</b>
<b>Electrode</b>	<b>23015187</b>



<b>PC 43</b>	
<b>Plasma torch</b>	<b>PT40</b>
<b>Input voltage</b>	(1ph) <b>230V ± 10% · 50/60Hz</b>
<b>Power 60%</b>	<b>3,3 KVA</b>
<b>U<sub>o</sub></b>	<b>350 V</b>
<b>Amp Min-Max</b>	<b>15 ÷ 40 A</b>
<b>Duty cycle 40°C</b>	<b>40A @ 20%</b> <b>25A @ 60%</b> <b>20A @ 100%</b>
<b>Severance</b>	<b>15 mm</b>
<b>Quality cutting</b>	<b>13 mm</b>
<b>Air pressure</b>	<b>4 - 5 bar</b>
<b>Air capacity</b>	<b>100 l/min</b>
<b>Insulation</b>	<b>H</b>
<b>Protection degree</b>	<b>IP22S</b>
<b>Dimensions (LxWxH)</b>	<b>155x430x320 mm</b>
<b>Box (LxWxH)</b>	<b>260x560x355 mm</b>
<b>Weight gross/net</b>	<b>11,8 / 10,8 kg</b>
<b>Part number</b>	<b>99830019</b>

The Plasma, based on Inverter technology, guarantees accurate and clean plasma cut up to 13mm thickness. Easy to handle and operate, this system is suitable for cutting thin materials at high speed. The front panel is provided with clear and simple graphics for the adjustment of the cutting current and to indicate the intervention of any of the internal safety devices. Extra operator protection is provided by a special Start system. It is well suited for auto body repair shops, air conditioning systems and general plate working.


**INCLUDED**

<b>Plasma torch</b>	<b>23010070 · PT40 · 4m</b>
<b>Ground cable</b>	<b>43210150 · 6mm<sup>2</sup> · 4m</b>

**CONSUMABLE KIT INCLUDED**

<b>Contact tip</b>	<b>23015224 · Ø 0,9 mm · 30-40A</b>
<b>Contact tip</b>	<b>23015186 · Ø 0,8 mm · 20-30A</b>
<b>Contact tip</b>	<b>23015189 · Ø 0,65 mm · 10-20A</b>
<b>Electrode</b>	<b>23015187</b>



**PC COMBI 302K**

<b>Plasma torch</b>	<b>PT40C</b>	
<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz	
<b>Power 60%</b>	2,5/3 KVA	
<b>U<sub>0</sub></b>	310 V	
	<b>Internal compressor</b>	<b>External air</b>
<b>Amp Min-Max</b>	12 ÷ 25 A	12 ÷ 28 A
<b>Duty cycle 40°C</b>	25A @ 40% 12A @ 100%	28A @ 30% 12A @ 100%
<b>Severance</b>	8 mm	10 mm
<b>Air pressure</b>	-	4,5 bar
<b>Air capacity</b>	-	100 l/min
<b>Insulation</b>	H	
<b>Protection degree</b>	IP22S	
<b>Dimensions (LxWxH)</b>	200x435x395 mm	
<b>Box (LxWxH)</b>	290x560x400 mm	
<b>Weight gross/net</b>	20,4 / 19 kg	
<b>Part number</b>	99830015	

Plasma cutting systems based on inverter technology with internal compressor. Portable, single-phase, microprocessor-controlled and equipped with pneumatic torch without HF. Easily used even at some distance from a compressed air source, they produce quality cutting on all conductor materials such as steel, stainless steel, aluminium, copper, brass, etc. Suitable for lightweight and heavy bodywork, maintenance of large installations, air conditioning systems, shipyards and metalwork in general.



**INCLUDED**

<b>Plasma torch</b>	23010067 · PT40C · 4m
<b>Ground cable</b>	43210150 · 6mm <sup>2</sup> · 4m

**CONSUMABLE KIT INCLUDED**

<b>Contact tip</b>	23015186 · Ø 0,8 mm · 20-30A
<b>Contact tip</b>	23015189 · Ø 0,65 mm · 10-20A
<b>Electrode</b>	23015187
<b>Nozzle</b>	23015188 · 6 fori (for external compressor)



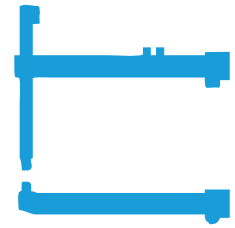




# SPOT WELDING



# ◦ SPOT WELDING



	PART NUMBER	INPUT VOLTAGE	MATERIAL
<b>SPOT CAR EVO 4000</b>	99500043	1ph 230V ± 10%	Steel
<b>SPOT CAR EVO 5000</b>	99500044	1ph 400V ± 10%	Steel
<b>SPOT CAR ALU 33</b>	99500039	1ph 230V ± 10%	Aluminium / Steel
<b>SPOT CAR ALU 66</b>	99500040	1ph 230V ± 10%	Aluminium / Steel
<b>SPOTWELD 21</b>	99500030	1ph 230V ± 10%	Steel
<b>SPOTWELD 22E</b>	99500022	1ph 230V ± 10%	Steel

**SPOT CAR EVO 4000**

<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz
<b>Power 50%</b>	2,5 KVA
<b>Max peak power</b>	13 KVA
<b>Delayed fuse</b>	T16 A
<b>U<sub>o</sub></b>	8 V
<b>Amp. Out</b>	2850 (2%) A
<b>Amp. Out Max</b>	3200 A
<b>Insulation</b>	H
<b>Protection degree</b>	IP22S
<b>Dimensions (LxWxH)</b>	250x370x280 mm
<b>Box (LxWxH)</b>	290x490x365 mm
<b>Weight gross/net</b>	23,8 / 23,3 kg
<b>Part number</b>	99500043

Multifunction Spotter ideal for quick works on car body, controller by microprocessor easy and fast setting through synergic programs for welding washers, rivets, wavy wires, heating and squeezing function included. Automatic start contact system or manual. Possibility to set the automatic spot welding time Supplied with gun, hearth cable, Kit accessories included: Hammer, 10 pieces three point washers kit, cylindrical head for three point washers, carbon electrode, squeezing electrode


**INCLUDED**

<b>Ground cable</b>	99920108 · 50mm <sup>2</sup> · 2,2m
<b>Fast ground</b>	99920122 · 16mm <sup>2</sup> · 2m
<b>Spot gun</b>	99920218 · 50mm <sup>2</sup> · 2m · 3 pin
<b>Accessories box</b>	99920525

**OPTIONAL**

<b>Trolley</b>	99900194A
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**SPOT CAR EVO 5000**

<b>Input voltage</b>	(1ph) 400V ± 10% · 50/60Hz
<b>Power 50%</b>	6 KVA
<b>Max peak power</b>	13 KVA
<b>Delayed fuse</b>	T20 A
<b>U<sub>o</sub></b>	7,5 V
<b>Amp. Out</b>	3600 (3,5%) A
<b>Amp. Out Max</b>	5000 A
<b>Insulation</b>	H
<b>Protection degree</b>	IP22S
<b>Dimensions (LxWxH)</b>	250x370x280 mm
<b>Box (LxWxH)</b>	290x490x365 mm
<b>Weight gross/net</b>	29,7 / 28,7 kg
<b>Part number</b>	99500044

Multifunction Spotter ideal for quick works on car body, controller by microprocessor easy and fast setting through synergic programs for welding washers, rivets, wavy wires, heating and squeezing function included. Automatic start contact system or manual. Possibility to set the automatic spot welding time Supplied with gun, hearth cable, Kit accessories included: Hammer, 10 pieces three point washers kit, cylindrical head for three point washers, carbon electrode, squeezing electrode


**INCLUDED**

<b>Ground cable</b>	99920216 · 70mm <sup>2</sup> · 2,2m
<b>Fast ground</b>	99920122 · 16mm <sup>2</sup> · 2m
<b>Spot gun</b>	99920223 · 70mm <sup>2</sup> · 2m · 3 pin
<b>Accessories box</b>	99920525

**OPTIONAL**

<b>Trolley</b>	99900194A
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	SPOT CAR ALU 33	SPOT CAR ALU 66
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	SPOT CAR ALU 33	SPOT CAR ALU 66
Input voltage (1ph)	230V ± 10% · 50/60Hz	230V ± 10% · 50/60Hz
Fuse	T6,3 A	T6,3 A
V <sub>o</sub>	< 20 V	< 20 V
C	33000 µF	66000 µF
E	650 Joule max	1500 Joule max
T <sub>s</sub>	1 ms	1,5 ms
Alu studs Ø	3 - 6 mm	3 - 8 mm
Dimensions (LxWxH)	250x370x280 mm	250x370x280 mm
Box (LxWxH)	290x560x400 mm	290x560x400 mm
Weight gross/net	16 / 15 kg	18 / 16,9 kg
Part number	99500039	99500040

Spot Car Alu is a power source for capacitor discharge welding of studs from M3 to M8. Particularly suitable for quick repairs on aluminum bodywork. Controlled by a microprocessor. It is equipped with an advanced safety system that allows the discharge of the capacitor only when in contact with the piece.



INCLUDED	
Fast Gun + Ground cable	99920500 · 3m · 3 pin
Accessories box	99920134
OPTIONAL	
Trolley	99900194A

	SPOTWELD 21	SPOTWELD 22E
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	SPOTWELD 21	SPOTWELD 22E
Input voltage. (1ph)	230V ± 10% · 50/60Hz	230V ± 10% · 50/60Hz
Delayed fuse	16 A	25 A
Power 50%	1,3 KVA	1,6 KVA
Spot current	3800 (1,5%) Max A	6900 (1,5%) Max A
Max.	1 + 1 mm	2 + 2 mm
Spots / Thickness	300 / 1 + 1 N°/mm	300 / 1 + 1 N°/mm
U <sub>o</sub> Max.	2 V	2,5 V
Power max.	6 KW	13 KW
Dimensions (LxWxH)	100x440x185 mm	100x440x185 mm
Box (LxWxH)	165x455x340 mm	165x455x340 mm
Weight gross/net	11 / 10,6 kg	11,4 / 11,1 kg
Part number	99500030	99500022

Portable spot-welders which can be directly connected to a grounded power outlet. Designed to be used in demanding applications, the SPOT-WELD is available in two versions: in the first model, spot-welding time is manually controlled by the operator, whereas the second version has electronic time control. The high level of transformer insulation safeguards the operator. Simplicity and low operating costs are the strong points of the SPOT-WELD range. Not suitable for intensive use.







# BATTERY CHARGERS & STARTERS

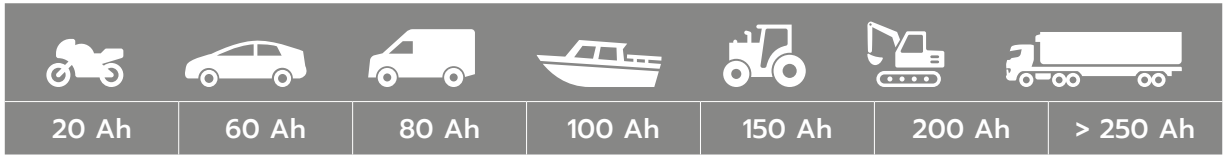
	PART NUMBER	INPUT VOLTAGE	BATTERY VOLTAGE	CHARG POSITIONS	FLOAT CHARGE	TIMER	AMMETER	CPS	LEAD BATTERY	LIQUID CALCIUM	LIQUID AGM	START / STOP	GEL SEALED	LiFePO <sub>4</sub>
<b>VOYAGER 4</b>	99000086	1ph 230V	6/12	9	■	■	■		■	■	■	■	■	■
<b>VOYAGER 8</b>	99000087	1ph 230V	12/24	9	■	■	■		■	■	■	■	■	■
<b>VOYAGER 16</b>	99000088	1ph 230V	12/24	9	■	■	■		■	■	■	■	■	■
<b>VOYAGER 25</b>	99000089	1ph 230V	12/24	9	■	■	■		■	■	■	■	■	■
<b>DISCOVERY MOTO</b>	99000076	1ph 230V	12	8	■				■	■	■	■	■	
<b>DISCOVERY 60</b>	99000074	1ph 230V	6/12	8	■		■		■	■	■	■	■	■
<b>DISCOVERY 120 PLUS</b>	99000083	1ph 230V	12/24	8	■		■		■	■	■	■	■	■
<b>DISCOVERY 250</b>	99000082	1ph 230V	12/24	8	■		■		■	■	■	■	■	■
<b>EXPLORER 120</b>	99000084	1ph 230V	12	8	■	■	■		■	■	■	■	■	■
<b>EXPLORER 130</b>	99000085	1ph 230V	12	8	■	■	■		■	■	■	■	■	■
<b>PROGRESS 14</b>	99000067	1ph 230V	6/12	2			■		■					
<b>PROGRESS 17</b>	99000068	1ph 230V	12/24	2			■		■					
<b>PROGRESS 20</b>	99000069	1ph 230V	12/24	2			■		■					
<b>ARTIK 22</b>	99000077	1ph 230V	12/24	4			■		■					
<b>ARTIK 33</b>	99000072	1ph 230V	12/24	4			■		■					

# BATTERY CHARGERS & STARTERS

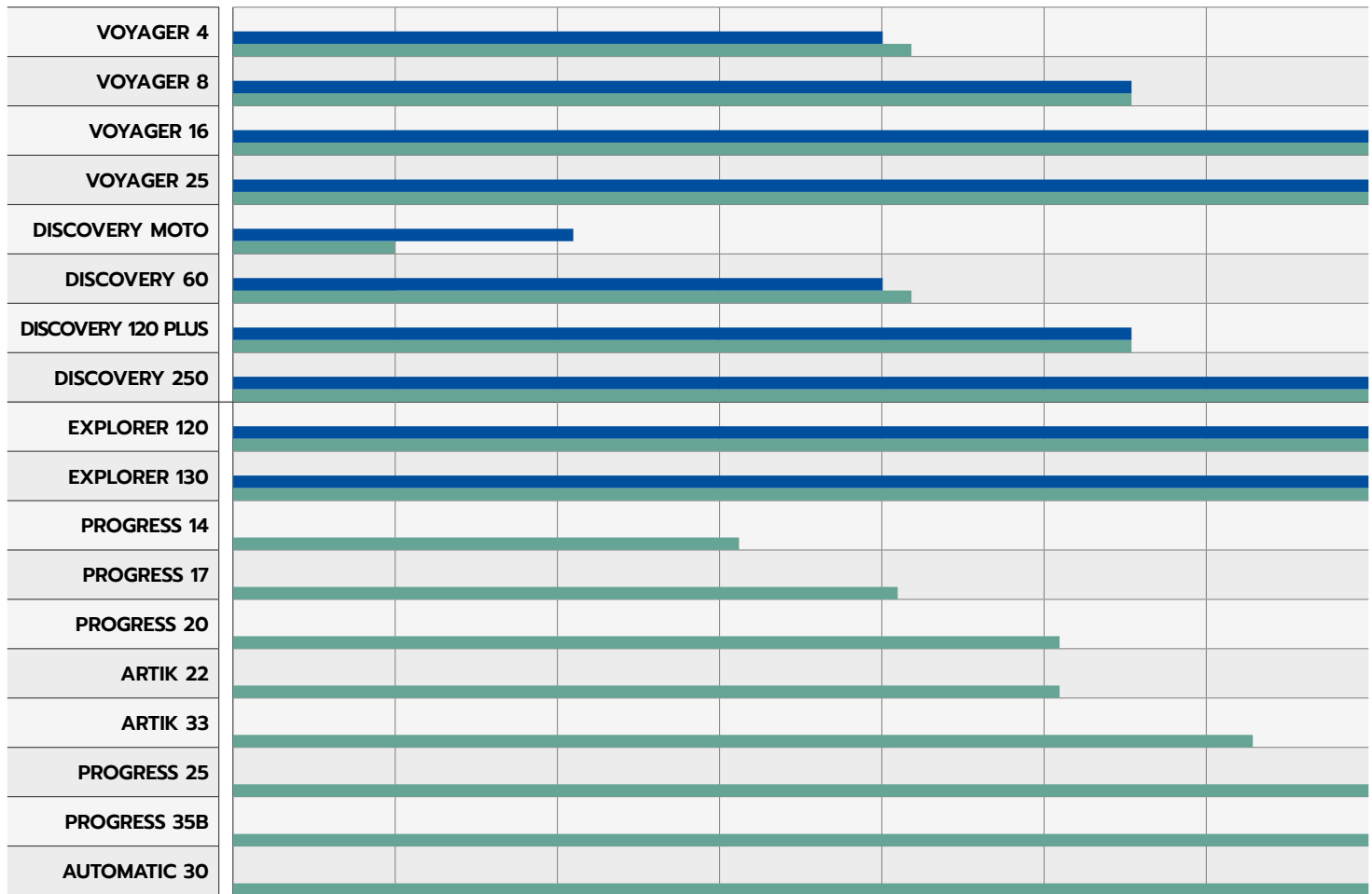
	PART NUMBER	INPUT VOLTAGE	BATTERY VOLTAGE	CHARG. POSITIONS	FLOAT CHARGE	TIMER	AMMETER	CPS	LEAD BATTERY	LIQUID CALCIUM	LIQUID AGM	START / STOP	GEL SEALED	LiFePO <sub>4</sub>
<b>PROGRESS 25</b>	99000031	1ph 230V	6/12/24	6			▪		▪					
<b>PROGRESS 35B</b>	99000040	1ph 230V	6/12/24/36/48	12			▪		▪					
<b>AUTOMATIC 30</b>	99000066	1ph 230V	12/24	∞	▪		▪		▪	▪	▪	▪	▪	
<b>SPEEDY 150</b>	99005051	1ph 230V	12	2 + boost			▪		▪					
<b>SPEEDY 250</b>	99005052	1ph 230V	12/24	2 + boost			▪		▪					
<b>SPEEDY 430</b>	99005031	1ph 230V	12/24	4 + boost			▪		▪					
<b>RAPID 280</b>	99005040	1ph 230V	12	2 + boost			▪		▪					
<b>RAPID 380</b>	99005041	1ph 230V	12/24	2 + boost			▪		▪					
<b>RAPID 480</b>	99005053	1ph 230V	12/24	6 + boost			▪		▪					
<b>SPRINT CAR 341</b>	99010046	1ph 230V	12/24	4 + boost			▪		▪					
<b>SPRINT CAR 441</b>	99010047	1ph 230V	12/24	4 + boost			▪		▪					
<b>SPRINT CAR 540</b>	99010041	1ph 230V	12/24	6 + boost		▪	▪		▪					
<b>SPRINT CAR 640</b>	99010030	1ph 230V	12/24	6 + boost		▪	▪		▪					
<b>AUTOSTAR 300</b>	99005043	1ph 230V	12	2 + boost			▪	▪	▪					
<b>AUTOSTAR 500</b>	99005044	1ph 230V	12/24	6 + boost			▪	▪	▪					
<b>AUTOSTAR 701</b>	99010037	1ph 230V	12/24	6 + boost		▪	▪	▪	▪					
<b>AUTOSTAR 1001</b>	99010038	3ph 230/400V	12/24	14 + boost		▪	▪	▪	▪					
<b>AUTOSTAR 1300</b>	99010042	3ph 230/400V	12/24	12 + boost		▪	▪	▪	▪					
<b>AUTOSTAR 2000</b>	99010043	3ph 230/400V	12/24	12 + boost		▪	▪	▪	▪					
<b>DIGICAR 540E</b>	99010049	1ph 230V	12/24	4 + boost	▪	▪	▪	▪	▪	▪	▪	▪	▪	
<b>DIGICAR 1100E</b>	99010051	1ph 230V	12/24	4 + boost + supply	▪	▪	▪	▪	▪	▪	▪	▪	▪	
<b>BOOSTY 25</b>	99005068	1ph 230V	12	boost										
<b>BOOSTY 31</b>	99005064	1ph 230V	12	boost										
<b>BOOSTY TRUCK 12/24</b>	99005065	1ph 230V	12/24	boost										
<b>POWER UP 8.0</b>	99005067	1ph 230V	12	boost										
<b>SUPER POWER 13.0</b>	99005069	1ph 230V	12	boost										
<b>BATTERY TESTER T5</b>	99090038	1ph 230V	-	tester										
<b>BATTERY TESTER T13</b>	99090070	1ph 230V	-	tester										

# PRODUCT GUIDE LINE

- █ Max charge capacity (15Ah)
- █ Maintenance
- █ Boost capacity
- █ 5min Fast charge + Boost

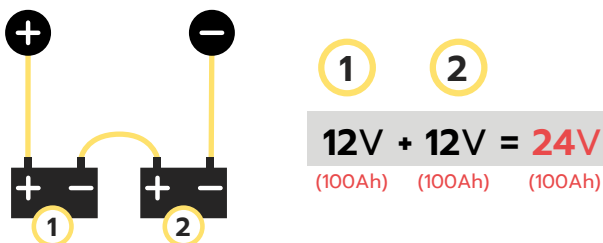


## CHARGERS

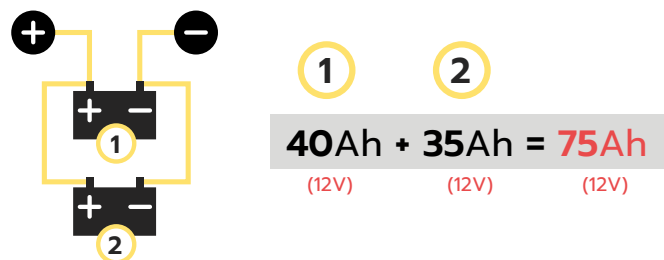


## BATTERY CONNECTION

### SERIAL CONNECTION



### PARALLEL CONNECTION



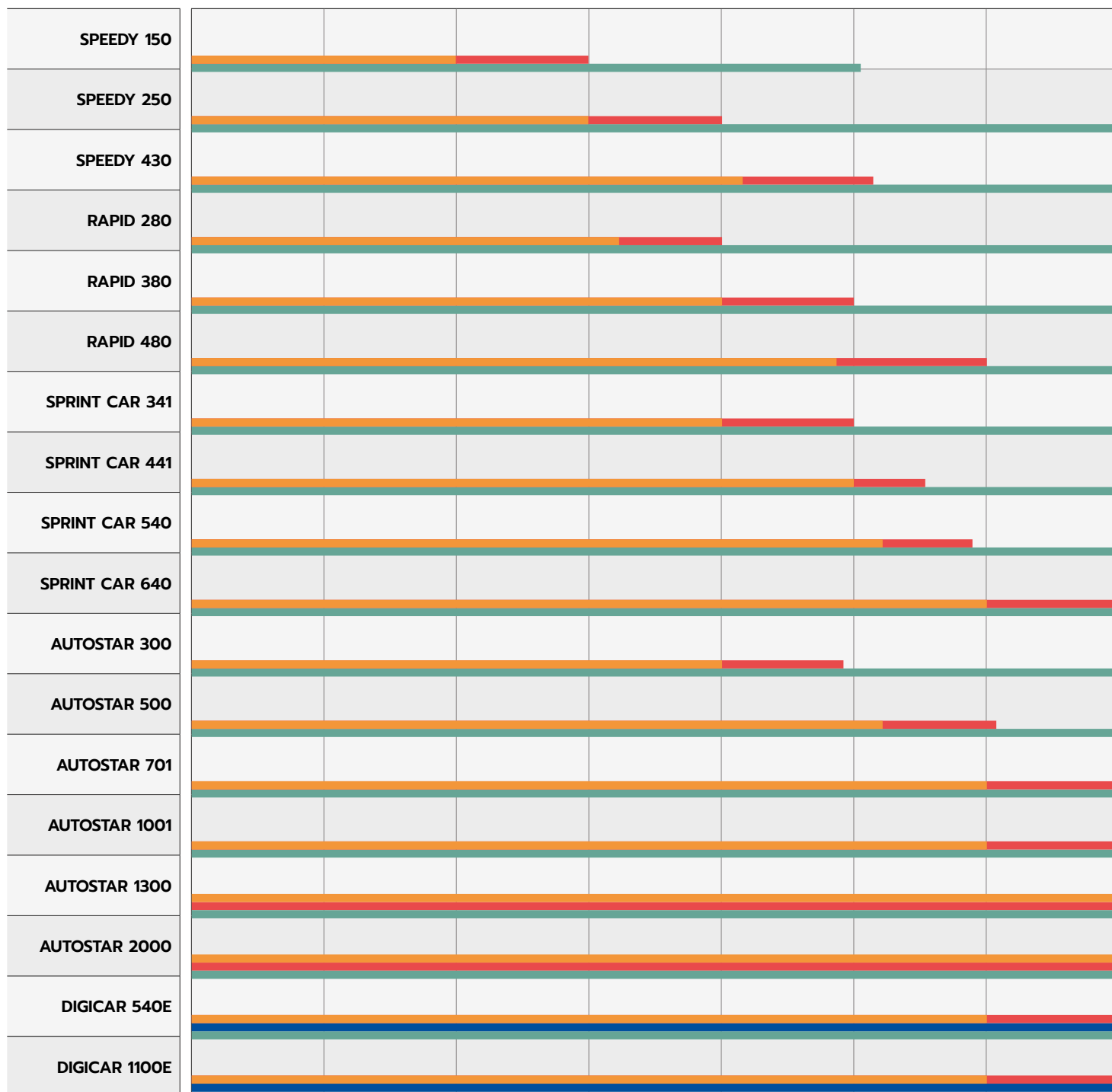


# PRODUCT GUIDE LINE

- Max charge capacity (15Ah)
- Maintenance
- Boost capacity
- 5min Fast charge + Boost



## CHARGERS & STARTERS



**VOYAGER 4**

<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz	
<b>Battery voltage</b>	6 V	12 V
<b>Charging current</b>	1A / 4A	1A / 4A
<b>Charge capacity (12V)</b>	5-80Ah (LiFePO <sub>4</sub> , 1-80Ah)	
<b>Maintenance capacity (12V)</b>	5-120Ah (LiFePO <sub>4</sub> , 1-120Ah)	
<b>Charging positions</b>	9	
<b>Functions</b>	Battery tester · Desulphation	
<b>Protections</b>	Reverse polarity · Short circuit Overheating · Overload Over-temperature · Spark protection	
<b>DC power supply</b>	N/A	
<b>Protection degree</b>	IP65	
<b>Dimensions (LxWxH)</b>	184 x 91 x 58 mm	
<b>Gross weight</b>	0,75 Kg	
<b>Part number</b>	99000086	

NEW GENERATION SMART BATTERY CHARGER · Battery voltage check · Engine start test · Alternator test · 100% Full automatic · Digital display · 9 Step charging technology · Microprocessor controlled · Power failure recovery · Pb · GEL · Ca/Ca · AGM · Start/Stop · LiFePO<sub>4</sub> · Reverse connection protection system · Easy to use · Charging maintenance optimization · Ergonomic design


**VOYAGER 8**

<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz	
<b>Battery voltage</b>	12 V	24 V
<b>Charging current</b>	2A / 4A / 8A	2A / 4A
<b>Charge capacity (12V)</b>	10-160Ah (LiFePO <sub>4</sub> , 2-160Ah)	
<b>Maintenance capacity (12V)</b>	10-250Ah (LiFePO <sub>4</sub> , 2-250Ah)	
<b>Charging positions</b>	9	
<b>Functions</b>	Battery tester · Desulphation · Power Supply	
<b>Protections</b>	Reverse polarity · Short circuit Overheating · Overload Over-temperature · Spark protection	
<b>DC power supply</b>	13,8 V · 5 A	
<b>Protection degree</b>	IP65	
<b>Dimensions (LxWxH)</b>	223 x 112 x 68 mm	
<b>Gross weight</b>	0,91 Kg	
<b>Part number</b>	99000087	

NEW GENERATION SMART BATTERY CHARGER · Battery voltage check · Engine start test · Alternator test · 100% Full automatic · Digital display · 9 Step charging technology · Microprocessor controlled · Power failure recovery · Supply mode · Pb · GEL · Ca/Ca · AGM · Start/Stop · LiFePO<sub>4</sub> · Reverse connection protection system · Easy to use · Charging maintenance optimization · Ergonomic design



**VOYAGER 16**

Input voltage	(1ph) 230V ± 10% · 50/60Hz	
Battery voltage	12 V	24 V
Charging current	4A / 8A / 16A	4A / 8A
Charge capacity (12V)	20-360Ah (LiFePO <sub>4</sub> , 4-360Ah)	
Maintenance capacity (12V)	20-550Ah (LiFePO <sub>4</sub> , 4-550Ah)	
Charging positions	9	
Functions	Battery tester · Desulphation · Power Supply	
Protections	Reverse polarity · Short circuit Overheating · Overload Over-temperature · Spark protection	
DC power supply	13,8 V · 12 A	
Protection degree	IP20	
Dimensions (LxWxH)	298 x 152 x 88 mm	
Gross weight	2,17 Kg	
Part number	99000088	

NEW GENERATION SMART BATTERY CHARGER · Battery voltage check · Engine start test · Alternator test · 100% Full automatic · Digital display · 9 Step charging technology · Microprocessor controlled · Power failure recovery · Supply mode · Pb · GEL · Ca/Ca · AGM · Start/ Stop · LiFePO<sub>4</sub> · Reverse connection protection system · Easy to use · Charging maintenance optimization · Ergonomic design



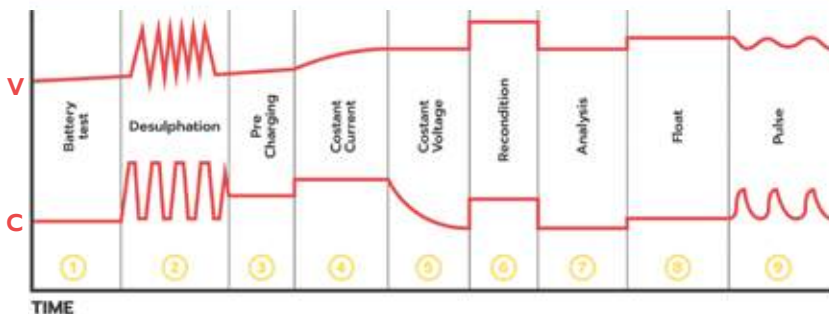
**VOYAGER 25**

Input voltage	(1ph) 230V ± 10% · 50/60Hz	
Battery voltage	12 V	24 V
Charging current	6A / 12A / 24A	6A / 12A
Charge capacity (12V)	30-550Ah (LiFePO <sub>4</sub> , 6-550Ah)	
Maintenance capacity (12V)	30-800Ah (LiFePO <sub>4</sub> , 6-800Ah)	
Charging positions	9	
Functions	Battery tester · Desulphation · Power Supply	
Protections	Reverse polarity · Short circuit Overheating · Overload Over-temperature · Spark protection	
DC power supply	13,8 V · 20 A	
Protection degree	IP20	
Dimensions (LxWxH)	298 x 152 x 88 mm	
Gross weight	2,11 Kg	
Part number	99000089	

NEW GENERATION SMART BATTERY CHARGER · Battery voltage check · Engine start test · Alternator test · 100% Full automatic · Digital display · 9 Step charging technology · Microprocessor controlled · Power failure recovery · Supply mode · Pb · GEL · Ca/Ca · AGM · Start/ Stop · LiFePO<sub>4</sub> · Reverse connection protection system · Easy to use · Charging maintenance optimization · Ergonomic design



**9 STEP AUTOMATIC FAST CHARGE**



**VOYAGER RANGE**

- |                    |               |
|--------------------|---------------|
| 1 Battery test     | 6 Recondition |
| 2 Desulphation     | 7 Analysis    |
| 3 Pre charging     | 8 Float       |
| 4 Constant current | 9 Pulse       |
| 5 Constant voltage |               |



**DISCOVERY MOTO**

Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	28 W
Battery voltage	12 V
Amp 60335-2-29	1,5 A
Rated ref. cap.	9/20 Ah 15h
Charging positions	-
Dimensions (LxWxH)	108x56x48 mm
Box (LxWxH)	165x65x110 mm
Weight gross/net	0,38 / 0,35 Kg
Part number	99000076



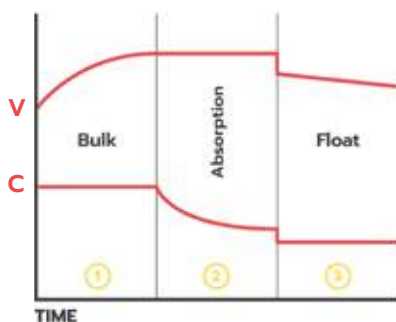
Range of 100% electronic battery charger with no output voltage spikes, which can damage the vehicles' circuit boards. Ideal for charging AGM, Ca/Ca, GEL, lead and Start/Stop batteries. The user has the possibility of setting the charge voltage and current to various levels based on the models. Fix current 1,5 Amp. IP65 protection against atmospheric agents.

**DISCOVERY 60**

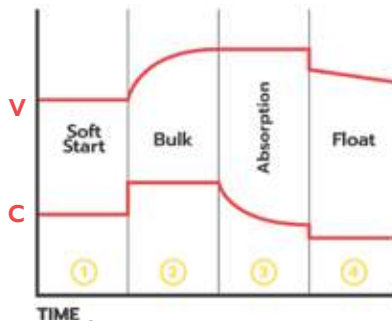
Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	65 W
Battery voltage	6/12 V
Amp 60335-2-29	4 A
Rated ref. cap.	60 Ah 15h
Charging positions	4
Dimensions (LxWxH)	225x80x50 mm
Box (LxWxH)	285x185x60 mm
Weight gross/net	0,76 / 0,70 Kg
Part number	99000074



Range of 100% electronic battery charger with no output voltage spikes, which can damage the vehicles' circuit boards. Ideal for charging AGM, Ca/Ca, GEL, lead, Start/Stop and LiFePO<sub>4</sub> batteries. The user has the possibility of setting the charge voltage and current to various levels based on the models. 6/12V voltage selection, four-level current steps, ideal for motorcycles and cars. Maintenance function. IP65 protection against atmospheric agents.

**3 LEVEL CHARGING**

**DISCOVERY MOTO**

- 1 Bulk
- 2 Absorption
- 3 Float

**4 LEVEL CHARGING**

**DISCOVERY 60**

- 1 Soft start
- 2 Bulk
- 3 Absorption
- 4 Float

### DISCOVERY 120 PLUS

Input voltage	(1ph) 230V ± 10% · 50/60Hz	
Power	135 W	
Battery voltage	12 V	24 V
Amp 60335-2-29	7,6 A	3,8 A
Rated ref. cap.	120 Ah 15h	
Charging positions	9	
Dimensions (LxWxH)	235x100x60 mm	
Box (LxWxH)	315x200x73 mm	
Weight gross/net	1,1 / 1,0 Kg	
Part number	99000083	

Range of 100% electronic battery charger with no output voltage spikes, which can damage the vehicles' circuit boards. Ideal for charging AGM, Ca/Ca, GEL, lead, Start/Stop and LiFePO<sub>4</sub> batteries. The user has the possibility of setting the charge voltage and current to various levels based on the models. 12/24 V voltage, nine-level current steps, ideal for cars, vans and small boats. Desulphation function and lcd display. Maintenance and Supply functions. IP65 protection against atmospheric agents.



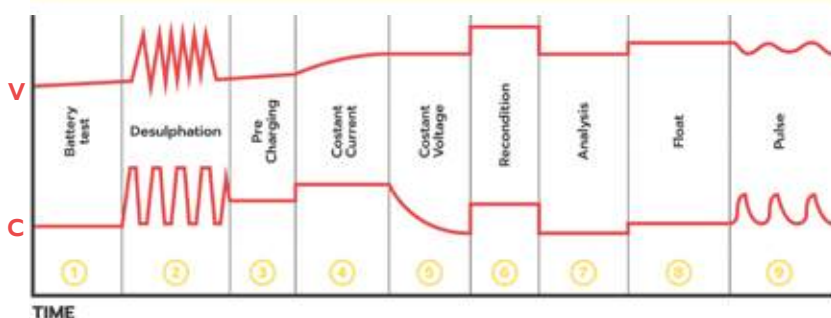
### DISCOVERY 250

Input voltage	(1ph) 230V ± 10% · 50/60Hz	
Power	300 W	
Battery voltage	12 V	24 V
Amp 60335-2-29	16 A	8 A
Rated ref. cap.	250 Ah 15h	
Charging positions	9	
Dimensions (LxWxH)	295x125x75 mm	
Box (LxWxH)	340x215x90 mm	
Weight gross/net	2,0 / 1,9 Kg	
Part number	99000082	

Range of 100% electronic battery charger with no output voltage spikes, which can damage the vehicles' circuit boards. Ideal for charging AGM, Ca/Ca, GEL, lead, Start/Stop and LiFePO<sub>4</sub>. The user has the possibility of setting the charge voltage and current to various levels based on the models. 12/24 V voltage, nine-level current steps, ideal for cars, vans and small boats. Desulphation function and lcd display. Maintenance function. IP65 protection against atmospheric agents.



### 9 STEP AUTOMATIC FAST CHARGE



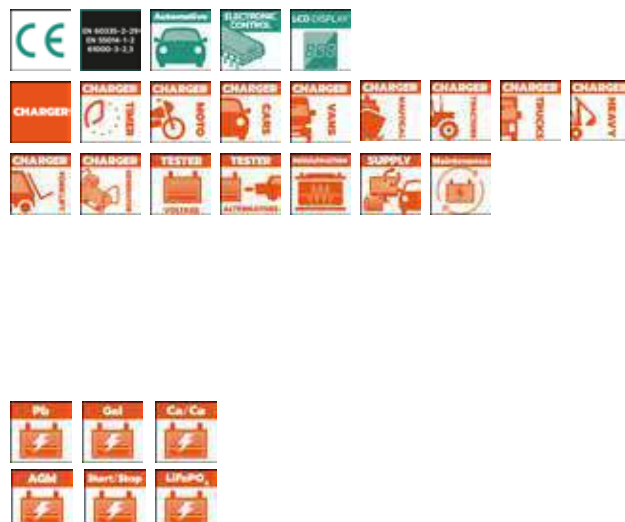
### DISCOVERY 120 PLUS / DISCOVERY 250

- 1 Battery test
- 2 Desulphation
- 3 Pre charging
- 4 Constant current
- 5 Constant voltage
- 6 Recondition
- 7 Analysis
- 8 Float
- 9 Pulse





	EXPLORER 120	EXPLORER 130
Input voltage	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
Power	1600 W	2000 W
Battery voltage	12 V	12 V
Amp 60335-2-29	100 A	120 A
Rated ref. cap.	1200 Ah 15h	1500 Ah 15h
Charging positions	∞	∞
Dimensions (LxWxH)	320x292x110 mm	330x130x282 mm
Box (LxWxH)	345x230x350 mm	405x215x385 mm
Weight gross/net	8,6 / 4,7 Kg	10,6 / 10,0 Kg
Part number	99000084	99000085



**PERFECT FOR BATTERY SUPPORT DURING DIAGNOSTIC AND REPROGRAMMING**

Our new multi-process battery chargers EXPLORER 120 and 130 are designed with the latest inverter technology and are fully connected. Capable of charging up to 120Amp. They can charge 12V batteries, both Lead (Gel, AGM, Liquid, Calcium) and Lithium (LiFePO4). Perfect as equipment to support the battery during diagnostic (reprogramming) or showroom needs.

**4 OPERATING MODES:**

Charge: for 12 V Lead (Gel, AGM, Liquid, Calcium) or Lithium (LiFePO4) batteries from 5 to 1500 Ah · Diagnostic: battery support function up to 120Amp for 12V batteries during the reprogramming of the vehicles' PCBs or during diagnostic test · Showroom: provides the battery with current compensation when using the electrical accessories of a demonstration vehicle · Tester: possibility to test the vehicle's battery. Alternator test or boosting test.

**AUTOMATIC CHARGE:**

Equipped with an "Automatic Charge" mode which allows to extend the battery life and performance. The software in charging mode has 2 different charging curves between Lead and Lithium batteries. 8 step charge for Lead and 9 step charge for Lithium batteries.

**ADVANCED MODES:**

In addition to the functions listed above, the battery chargers have advanced modes such as: "Auto-detect" charging process that allows the start of the charge in automatic mode · "Auto-restart" function: in case of power failure the device restarts from the stop point · Calibration function in case of charging cables over 5 meters (8 meters max) · 11 customizable profiles: possibility to save customized profiles according to the user preference

**OTHER FEATURES:**

USB port: Possibility to add, cancel or change the charging modes thanks to USB devices. Possibility to extract data for analysis. · Safe: it has various control and safety systems. Protection against short-circuits, reverse polarity, overcharging. Equipped with temperature sensor to prevent electronic part overheating · Shockproof and anti-vibration structure · Without external ventilation. Advantages: silent operation and no infiltration of dust or dirt from the outside.

**PROGRESS 14**

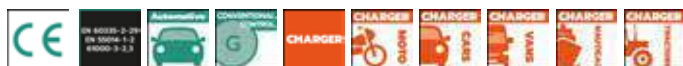
Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	140 W
Battery voltager	6/12 V
Amp. Eff.	11 A
Amp 60335-2-29	7,5 A
Rated ref. cap.	112 Ah 15h
Charging positions	2
Dimensions (LxWxH)	200x260x175 mm
Box (LxWxH)	230x275x205 mm
Weight gross/net	4,2 / 3,1 Kg
Part number	99000067

Semi-professional battery chargers for lead storage batteries. Equipped with voltage and current selectors, ammeter, automatic thermal overload and polarity protection


**PROGRESS 17**

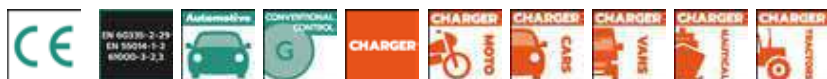
Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	300 W
Battery voltager	12/24 V
Amp. Eff.	12,5 A
Amp 60335-2-29	8,5 A
Rated ref. cap.	128 Ah 15h
Charging positions	2
Dimensions (LxWxH)	200x260x175 mm
Box (LxWxH)	230x275x205 mm
Weight gross/net	5,2 / 4,1 Kg
Part number	99000068

Semi-professional battery chargers for lead storage batteries. Equipped with voltage and current selectors, ammeter, automatic thermal overload and polarity protection


**PROGRESS 20**

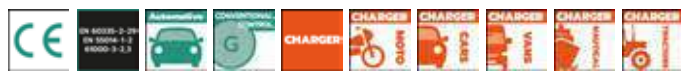
Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	390 W
Battery voltager	12/24 V
Amp. Eff.	16 A
Amp 60335-2-29	11 A
Rated ref. cap.	165 Ah 15h
Charging positions	2
Dimensions (LxWxH)	200x260x175 mm
Box (LxWxH)	230x275x205 mm
Weight gross/net	7 / 6,1 Kg
Part number	99000069

Semi-professional battery chargers for lead storage batteries. Equipped with voltage and current selectors, ammeter, automatic thermal overload and polarity protection



	ARTIK 22	ARTIK 33
Input voltage	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
Power	430 W	600 W
Battery voltager	12/24 V	12/24 V
Amp. Eff.	18 A	25 A
Amp 60335-2-29	12 A	17 A
Rated ref. cap.	180 Ah 15h	225 Ah 15h
Charging positions	4	4
Dimensions (LxWxH)	235x220x335 mm	235x220x335 mm
Box (LxWxH)	295x255x390 mm	295x255x390 mm
Weight gross/net	8,8 / 8,1 Kg	9,6 / 8,9 Kg
Part number	99000077	99000072

Semi-professional battery chargers for lead storage batteries. Equipped with voltage and current selectors, ammeter, automatic thermal overload and polarity protection.



	PROGRESS 25	PROGRESS 35B
Input voltage	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
Power	620 W	1830 W
Battery voltager	6/12/24 V	6/12/24/36/48 V
Amp. Eff.	25 A	38 A
Amp 60335-2-29	17 A	25 A
Rated ref. cap.	255 Ah 15h	375 Ah 15h
Charging positions	6	12
Dimensions (LxWxH)	245x250x435 mm	245x250x435 mm
Box (LxWxH)	280x285x465 mm	280x285x465 mm
Weight gross/net	12,8 / 12,2 Kg	22,8 / 22,2 Kg
Part number	99000031	99000040

Professional battery chargers suitable for large recharging plants. Equipped with voltage and current selectors, ammeter, voltmeter, automatic thermal overload protection.



	AUTOMATIC 30
Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	720 W
Battery voltager	12/24 V
Amp. Eff.	30 A
Amp 60335-2-29	20 A
Rated ref. cap.	600 Ah 15h
Charging positions	∞
Dimensions (LxWxH)	235x220x335 mm
Box (LxWxH)	295x255x390 mm
Weight gross/net	10,8 / 10,1 Kg
Part number	99000066

Automatic battery chargers ideal for AGM, GEL, Lead and Start/Stop batteries with electronic control of the charging current. Warning LEDs indicate the battery condition, charging current regulation by potentiometer. Automatic charging and maintenance function.





**SPEEDY 150**

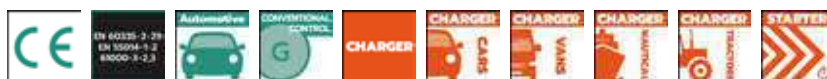
Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	190 W
Battery voltage	12 V
Amp. eff.	15 A
Amp. 60335-2-29	11 A
Max boost current	120 Acc
Amp 1/C	85 A
Rated ref. cap.	165 Ah 15h
Charging positions	2 + Boost
Dimensions (LxWxH)	200x260x175 mm
Box (LxWxH)	230x275x205 mm
Weight gross/net	6,4 / 6,0 Kg
Part number	99005051

Portable battery chargers and starters. Equipped with charging current control selector, ammeter, thermal overload protection, internal fuse protection against short circuits and polarity reversal.


**SPEEDY 250**
**SPEEDY 430**

	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
Input voltage	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
Power	650 W	1000 W
Battery voltage	12/24 V	12/24 V
Amp. eff.	27 A	45 A
Amp. 60335-2-29	18 A	30 A
Max boost current	200 Acc	350 Acc
Amp 1/C	135 A	260 A
Rated ref. cap.	270 Ah 15h	330 Ah 15h
Charging positions	2 + Boost	3 + Boost
Dimensions (LxWxH)	235x220x335 mm	245x250x435 mm
Box (LxWxH)	295x255x390 mm	280x285x465 mm
Weight gross/net	11,4 / 10,7 Kg	17,0/ 16,2 Kg
Part number	99005052	99005031

Portable battery chargers and starters. Equipped with charging current control selector, ammeter, thermal overload protection, internal fuse protection against short circuits and polarity reversal.



	RAPID 280	RAPID 380
--	-----------	-----------

Input voltage	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
Power	460 W	900 W
Battery voltage	12 V	12/24 V
Amp. eff.	38 A	38 A
Amp. 60335-2-29	25 A	25 A
Max boost current	230 Acc	280 Acc
Amp 1/C	160 A	200
Rated ref. cap.	270 Ah 15h	270 Ah 15h
Charging positions	2 + Boost	2 + Boost
Dimensions (LxWxH)	235x220x335 mm	235x220x335 mm
Box (LxWxH)	295x255x390 mm	295x255x390 mm
Weight gross/net	13,4 / 12,9 Kg	13,8 / 13,1 Kg
Part number	99005040	99005041

Portable battery chargers and starters. Equipped with charging current control selector, ammeter, thermal overload protection, internal fuse protection against short circuits and polarity reversal.



	RAPID 480
--	-----------

Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	1320 W
Battery voltage	12/24 V
Amp. eff.	55 A
Amp. 60335-2-29	36 A
Max boost current	450 Acc
Amp 1/C	315 A
Rated ref. cap.	450 Ah 15h
Charging positions	6 + Boost
Dimensions (LxWxH)	245x250x435 mm
Box (LxWxH)	280x285x465 mm
Weight gross/net	20,6 / 19,8 Kg
Part number	99005053

Portable battery chargers and starters. Equipped with charging current control selector, ammeter, thermal overload protection, internal fuse protection against short circuits and polarity reversal.



	<b>SPRINT CAR 341</b>	<b>SPRINTCAR 441</b>
<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
<b>Power</b>	1080 W	1320 W
<b>Battery voltage</b>	12/24 V	12/24 V
<b>Amp. eff.</b>	45 A	55 A
<b>Amp. 60335-2-29</b>	30 A	36 A
<b>Max boost current</b>	340 Acc	380 Acc
<b>Amp 1/C</b>	200 A	260 A
<b>Rated ref. cap.</b>	375 Ah 15h	450 Ah 15h
<b>Charging positions</b>	3 + Boost	3 + Boost
<b>Dimensions (LxWxH)</b>	395x260x770 mm	395x260x770 mm
<b>Box (LxWxH)</b>	360x280x660 mm	360x280x660 mm
<b>Weight gross/net</b>	19,0 / 18,1 Kg	22,0 / 21,1 Kg
<b>Part number</b>	99010046	99010047

Professional battery chargers and starters on wheels. Equipped with slow/fast charging current selector, ammeter, thermal overload protection and internal fuse protection against short circuits and polarity reversal.



	<b>SPRINT CAR 540</b>	<b>SPRINT CAR 640</b>
<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
<b>Power</b>	1440 W	1800 W
<b>Battery voltage</b>	12/24 V	12/24 V
<b>Amp. eff.</b>	60 A	75 A
<b>Amp. 60335-2-29</b>	40 A	50 A
<b>Max boost current</b>	480 Acc	550 Acc
<b>Amp 1/C</b>	330 A	400 A
<b>Rated ref. cap.</b>	525 Ah 15h	600 Ah 15h
<b>Charging positions</b>	6 + Boost	6 + Boost
<b>Dimensions (LxWxH)</b>	465x350x840 mm	465x350x840 mm
<b>Box (LxWxH)</b>	330x395x790 mm	330x395x790 mm
<b>Weight gross/net</b>	30,8 / 29,5 Kg	32 / 30,7 Kg
<b>Part number</b>	99010041	99010030

Professional battery chargers and starters on wheels. Equipped with slow/fast charging current selector, ammeter, thermal overload protection and internal fuse protection against short circuits and polarity reversal. Charge timer function.





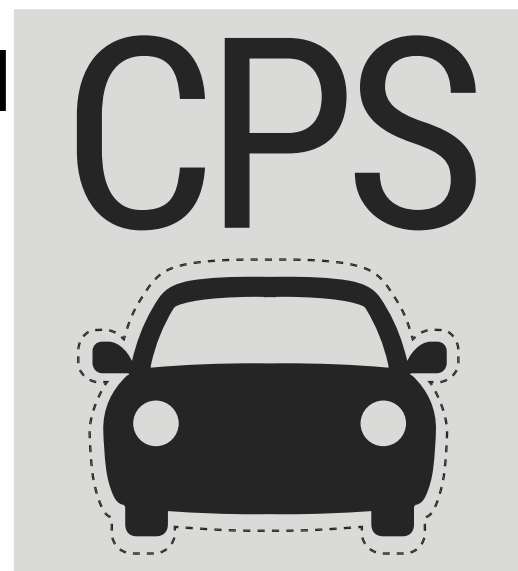
## CAR PROTECTION SYSTEM

The battery chargers equipped with **CPS Safe Car system** allow the charge or starting (boosting) of the vehicles in safety mode with the goal to preserve the integrity of both the battery and the electronics on board.

**Autostar range (CPS Boost):** Starting (Boosting) function with safety mode. The Autostar range thanks to the CPS – Car Protection system, allow the boosting of the vehicles in total safety. An electronic control allow to verify the charge status of the battery on board. The boosting start only within certain conditions. The pcb control the output voltage spikes in order to protect the electronics on board. **Digicar range (Full CPS):** this range has both the safety boosting mode and the possibility to control and set the charge of the batteries in an efficient mode, without disconnecting the battery from its terminals.

**Possibility to set / view:**

- type of battery to charge (optimal charging curve for each type)
- charging mode
- charging current or time of charging thanks to the easy to use potentiometer
- to view the set parameters thanks to the digital display



	AUTOSTAR 300	AUTOSTAR 500
<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
<b>Power</b>	300 W	890 W
<b>Battery voltage</b>	12 V	12/24 V
<b>Amp. eff.</b>	25 A	37 A
<b>Amp. 60335-2-29</b>	20 A	30 A
<b>Max boost current</b>	300 Acc	450 Acc
<b>Amp 1/C</b>	210 A	320 A
<b>Rated ref. cap.</b>	375 Ah 15h	540 Ah 15h
<b>Charging positions</b>	2 + Boost	6 + Boost
<b>Dimensions (LxWxH)</b>	345x250x280 mm	345x250x280 mm
<b>Box (LxWxH)</b>	440x275x255 mm	440x275x255 mm
<b>Weight gross/net</b>	14,6 / 13,7 Kg	19,6 / 18,3 Kg
<b>Part number</b>	99005043	99005044

Portable battery chargers and starters. Equipped with charging current control selector and charging current level ammeter. Protected with internal fuse protection against short-circuits or polarity reversal and thermostatic protection against protracted boostings. They are equipped with C.P.S. (car protection system) system in order to activate and disable, in a fully automatic way, the boosting function to protect the on board vehicle's board.



### AUTOSTAR 701

<b>Input voltage</b>	(1ph) 230V ± 10% · 50/60Hz
<b>Power</b>	1800 W
<b>Battery voltage</b>	12/24 V
<b>Amp. eff.</b>	75 A
<b>Amp. 60335-2-29</b>	50 A
<b>Max boost current</b>	550 Acc
<b>Amp 1/C</b>	400 A
<b>Rated ref. cap.</b>	600 Ah 15h
<b>Charging positions</b>	6 + Boost
<b>Dimensions (LxWxH)</b>	465x350x840 mm
<b>Box (LxWxH)</b>	420x350x770 mm
<b>Weight gross/net</b>	32,6 / 31,3 Kg
<b>Part number</b>	99010037

Battery chargers and starters on wheels. Equipped with charging current control selector and charging current level ammeter. Protected with internal fuse protection against short-circuits or polarity reversal and thermostatic protection against protracted boostings. They are equipped with C.P.S. (car protection system) system in order to activate and disable, in a fully automatic way, the boosting function to protect the on board vehicle's board.



### AUTOSTAR 1001

<b>Input voltage</b>	(3ph) 230/400V ± 10% 50/60Hz
<b>Power</b>	2200 W
<b>Battery voltage</b>	12/24 V
<b>Amp. eff.</b>	90 A
<b>Amp. 60335-2-29</b>	60 A
<b>Max boost current</b>	980 Acc
<b>Amp 1/C</b>	560 A
<b>Rated ref. cap.</b>	1350 Ah 15h
<b>Charging positions</b>	14 + Boost
<b>Dimensions (LxWxH)</b>	465x350x840 mm
<b>Box (LxWxH)</b>	420x350x770 mm
<b>Weight gross/net</b>	55,2 / 53,7 Kg
<b>Part number</b>	99010038

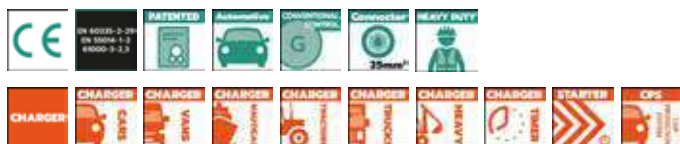
Battery chargers and starters on wheels. Equipped with charging current control selector and charging current level ammeter. Protected with internal fuse protection against short-circuits or polarity reversal and thermostatic protection against protracted boostings. They are equipped with C.P.S. (car protection system) system in order to activate and disable, in a fully automatic way, the boosting function to protect the on board vehicle's board.



**AUTOSTAR 1300**

Input voltage	(3ph) 230/400V ± 10% · 50/60Hz
Power	2900 W
Battery voltage	12/24 V
Amp. eff.	120 A
Amp. 60335-2-29	80 A
Max boost current	1280 Acc
Amp 1/C	850 A
Rated ref. cap.	1800 Ah 15h
Charging positions	12 + Boost
Dimensions (LxWxH)	575x330x770 mm
Box (LxWxH)	450x380x705 mm
Weight gross/net	70,6 / 69,2 Kg
Part number	99010042

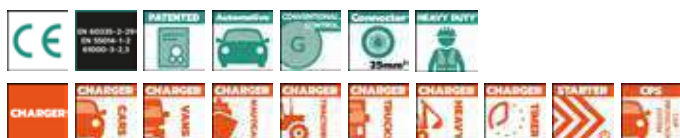
Battery chargers and starters on wheels. Equipped with charging current control selector and charging current level ammeter. Protected with internal fuse protection against short-circuits or polarity reversal and thermostatic protection against protracted boostings. They are equipped with C.P.S. (car protection system) system in order to activate and disable, in a fully automatic way, the boosting function to protect the on board vehicle's board.



**AUTOSTAR 2000**

Input voltage	(3ph) 230/400V ± 10% · 50/60Hz
Power	3600 W
Battery voltage	12/24 V
Amp. eff.	150 A
Amp. 60335-2-29	120 A
Max boost current	2000 Acc
Amp 1/C	1100 A
Rated ref. cap.	2250 Ah 15h
Charging positions	12 + Boost
Dimensions (LxWxH)	575x330x770 mm
Box (LxWxH)	450x380x705 mm
Weight gross/net	89,2 / 87,8 Kg
Part number	99010043

Battery chargers and starters on wheels. Equipped with charging current control selector and charging current level ammeter. Protected with internal fuse protection against short-circuits or polarity reversal and thermostatic protection against protracted boostings. They are equipped with C.P.S. (car protection system) system in order to activate and disable, in a fully automatic way, the boosting function to protect the on board vehicle's board.





## DIGICAR: INTELLIGENT CHARGER/STARTER

The DIGICAR are professional charger/starter with electronic control (microprocessor). An advanced control panel allows the user to select different type of batteries to charge (AGM, GEL, LIQUID or UNIVERSAL), 4 different charging levels (accordingly to the battery capacity), and/or to set a charging time (TIMER).

The electronic charging control guarantee an optimized battery charge (100%) and to avoid to disconnect the battery from the vehicle. The user is not required to check/control the charging process since that is fully automatic and safe.

Once the charging phase is complete, the DIGICAR will start the maintenance step. Battery voltage (12V or 24V) is shown on the display on board. During the charging phase it's possible to visualize the battery voltage, the charging % or residual charging time.

Moreover, thanks to 3 LED on the control panel, the user can check the battery status (Low, Medium, Fully charged). DIGICAR models are equipped with advanced safety systems such as: reverse polarity, overcurrent, battery fault, safe and protect boosting process.

**SUPPLY FUNCTION:** a very important feature for the new DIGICAR range is the SUPPLY function, which allows to keep supplied a vehicle's battery (at 13,5V or 27V) during the reprogramming of vehicle's electronic units.

**SAFE START:** thanks to the advanced electronic system (CPS), the DIGICAR range allow a safe and protect boost of the vehicles (at 12V or 24V). Very useful with modern vehicles which are equipped with various electronic boards that might get damaged in case of not-protect boosting with high voltage peak.

**AUTOMATIC START:** the CPS system do not require remote control for starting the vehicle. All DIGICAR models will supply the starting current only once the user turns the car's key.

DIGICAR 540E	
Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	1320 W
Battery voltage	12/24 V
Amp. eff.	55 A
Amp. 60335-2-29	36 A
Max boost current	380 Acc
Amp 1/C	260 A
Rated ref. cap.	810 Ah 15h
Charging positions	4 + Boost
Dimensions (LxWxH)	395x260x770 mm
Box (LxWxH)	360x280x660 mm
Weight gross/net	22,6 / 21,7 Kg
Part number	99010049



**DIGICAR 1100E + SUPPLY**

Input voltage	(1ph) 230V ± 10% · 50/60Hz
Power	2400 W
Battery voltage	12/24 V
Amp. eff.	100 A
Amp. 60335-2-29	70 A
Max boost current	580 Acc
Amp 1/C	400 A
Rated ref. cap.	5000 Ah 15h
Charging positions	4 + Boost + Supply
Dimensions (LxWxH)	465x350x840 mm
Box (LxWxH)	420x350x770 mm
Weight gross/net	35 / 33,5 Kg
Part number	99010051



**CONTROL PANEL**



- 1 Selection charge level or boost mode
- 2 Battery type selection
- 3 SUPPLY function
- 4 Timer
- 5 LED: Charge status or errors indication
- 6 Start/Stop key
- 7 Display: battery voltage (charge), residual time, overcurrent
- 8 ON/OFF switch


**INCLUDED**

Fuse spare parts KIT	99090032 · 500 A · 55mm
Smart Charger	99090048 · 3.8 Ah

Rechargeable power supply and boost starter ideal as an engine starter for cars, power boats, vans. It guarantees the lowest self-discharge and can be recharged by its own charger or from the cigarette lighter socket. Electronic memories on board are protected during the vehicles' batteries replacement. Several protection are fitted.

	<b>BOOSTY 25</b>	<b>BOOSTY 31</b>
<b>Recharge</b>	(1ph) 230V ± 10% · 50/60Hz	(1ph) 230V ± 10% · 50/60Hz
<b>Internal battery</b>	12V 22Ah	12V 23Ah
<b>Voltage</b>	12V	12V
<b>Boost rate</b>	2500 Amp	3100 Amp
<b>Cranking rate</b>	850Amp	1170Amp
<b>Charging capacity</b>	14.9V max	14.9V max
<b>Charging voltage</b>	12V 3.8Ah	12V 3.8Ah
<b>Charging technology</b>	Smart Charger	Smart Charger
<b>Lyfe of battery (cycles)</b>	400 Cycles	400 Cycles
<b>Batteries</b>	1	1
<b>Sealed battery</b>	▪	▪
<b>Voltage spikes protection</b>	▪	▪
<b>ABS shock-proof cases</b>	▪	▪
<b>Automatic charger</b>	▪	▪
<b>Lighter socket cord</b>	▪	▪
<b>Trolley</b>	-	-
<b>Buzzer</b>	-	-
<b>Completely isolated clamps</b>	▪	▪
<b>Cable diameter</b>	25 mm <sup>2</sup>	25 mm <sup>2</sup>
<b>Length of cables</b>	111 cm	111 cm
<b>Dimensions (LxWxH)</b>	430x160x335 mm	430x160x335 mm
<b>Box (LxWxH)</b>	470x180x370 mm	470x180x370 mm
<b>Weight gross/net</b>	11,2 / 11,0 kg	13,6 / 13,0 kg
<b>Part number</b>	99005068	99005064







INCLUDED	
Fuse spare parts KIT	99090032 · 500 A · 55mm
Smart Charger	99090048 · 3.8 Ah

Rechargeable power supply and boost starter ideal as an engine starter for cars, power boats, vans. It guarantees the lowest self-discharge and can be recharged by its own charger or from the cigarette lighter socket. Electronic memories on board are protected during the vehicles' batteries replacement. Several protection are fitted.

### BOOSTY TRUCK 12/24

Recharge	(1ph) 230V ± 10% · 50/60Hz	
Internal battery	12V 2x23 Ah	
Voltage	12V	24V
Boost rate	6200 Amp	3100 Amp
Cranking rate	2340 Amp	1170 Amp
Charging capacity	14.9 V	25,2 V
Charging voltage	12V 3.8Ah	
Charging technology	Smart Charger	
Lyfe of battery (cycles)	400 Cycles	
Batteries	2	
Sealed battery	▪	
Voltage spikes protection	▪	
ABS shock-proof cases	▪	
Automatic charger	▪	
Lighter socket cord	▪	
Trolley	▪	
Buzzer	▪	
Completely isolated clamps	▪	
Cable diameter	50 mm <sup>2</sup>	
Length of cables	165 cm	
Dimensions (LxWxH)	370x285x465 mm	
Box (LxWxH)	380x295x485 mm	
Weight gross/net	27,6 / 26,8 kg	
Part number	99005065	



**POWER UP 8.0**

<b>Input</b>	5V ≙ 2A
<b>Output</b>	5V ≙ 3A · 9V ≙ 2A
<b>Output quick charge</b>	5V ≙ 2.1A
<b>Output jump start</b>	12V
<b>Battery capacity</b>	8000 mAh
<b>Full charging time</b>	± 2h
<b>Start current</b>	200 A
<b>Peak current</b>	500A
<b>Operating temperature</b>	-20°C ~ 60°C
<b>Dimensions (LxWxH)</b>	156 x 83 x 29 mm
<b>Weight gross/net</b>	0,92 / 0,80 Kg
<b>Part number</b>	99005067

12V multifunction portable starter · High Efficiency LiPo Lithium Battery · 3 functions available: Booster 12V, Power Bank, Emergency LED light · Capable of starting all 12V vehicles up to 3.5L gasoline cars · USB port for charging electronic devices (mobile phones, tablets, MP3 players etc.) · Equipped with short-circuit protection, overload, over-discharge, polarity inversion, over-voltage · ABS structure with V0 fire rating · Long service life: over 1000 operating cycles


**SUPER POWER 13.0**

<b>Input</b>	5V ≙ 3A
<b>Output</b>	5V ≙ 2.4A
<b>Output quick charge</b>	5V ≙ 3A · 9V ≙ 2A · 12V ≙ 1.5A
<b>Output DC</b>	15V ≙ 10A
<b>Output Type-C</b>	15W
<b>Output jump start</b>	12V
<b>Battery capacity</b>	13000 mAh
<b>Full charging time</b>	± 5-6h
<b>Start current</b>	300 A
<b>Peak current</b>	800A
<b>Operating temperature</b>	-20°C ~ 60°C
<b>Dimensions (LxWxH)</b>	152 x 81 x 32 mm
<b>Weight gross/net</b>	1,2 / 0,9 Kg
<b>Part number</b>	99005069

12V multifunction portable starter · High Efficiency LiPo Lithium Battery · 3 functions available: Booster 12V, Power Bank, Emergency LED light · Capable of starting all 12V vehicles up to 3.5L gasoline cars · USB and USB Type-C port for charging electronic devices (mobile phones, tablets, MP3 players etc.) · Equipped with short-circuit protection, overload, over-discharge, polarity inversion, over-voltage · ABS structure with V0 fire rating · Long service life: over 1000 operating cycles



	T5	T13
Case dimensions (LxWxH)	320x105x285 mm	310x95x275 mm
Dimensions (LxWxH)	320x105x285 mm	320x105x285 mm
Weight gross/net	2,0 / 1,3 kg	1,8 / 1,6 kg
Part number	99090038	99090070

**PROFESSIONAL BATTERY & ELECTRICAL SYSTEM ANALYZER**

**MAIN FEATURES:**

Reverse polarity and short circuit protection · Ease of use: Pictograms only. No text. · Touch screen with sensor technology · Premium Carry-On Case · Modern LCD Display

**MODEL T5**

Battery Tester and Electrical System Analyzer · 12V Car & Motorcycles Batteries · Fully graphical display · WET, AGM, EFB & GEL Batteries · CCA, SAE, EN, IEC, DIN, CA, JIS · Starter & Alternator Tests · Data transfer to PC · Premium carry-on case

**MODEL T13**

12V Car & Motorcycles Batteries · Fully graphical display · WET, AGM, AGM Spiral EFB, CA & GEL Batteries · CCA, SAE, EN, EN1, EN2, IEC, DIN, CA/MCA, JIS · Starter & Alternator Tests · Grounding Tests · Data transfer to PC · Memory savings · Premium carry-on case · Built-in Printer



12/24V



12V






T13







# SAFETY

GoodPRO  
Graphic

HELIX

# SAFETY

## WELDING MASKS

	PART NUMBER	DESCRIPTION	OPTIC CLASS
<b>STORM VISION 4.1</b> + HELVI BAG XL	99900269	Welding mask with respiartor · 4 Sensors	1 / 1 / 1 / 1
<b>VISION 4.1</b> + HELMET BAG	21905147K	Welding mask · 4 Sensors	1 / 1 / 1 / 1
<b>SKY 4.0</b> + HELMET BAG	21905179K	Welding mask · 4 Sensors	1 / 1 / 1 / 2
<b>VISION 2.1</b> + HELMET BAG	21905100K	Welding mask · 2 Sensors	1 / 1 / 1 / 2
<b>SKY 2.0</b> + HELMET BAG	21905125K	Welding mask · 2 Sensors	1 / 1 / 1 / 2
<b>MIRAGE</b>	21905182	Manual welding mask · DIN 11	-
<b>HELMET BAG</b>	21905181	Practical bag for welding masks	-

## WELDING CLOTHING

	PART NUMBER	DESCRIPTION	AVAILABLE SIZES (European)
<b>JACKET</b>	21905135	Welding jacket	48 - 50 - 52 - 54 - 56
<b>THROUSERS</b>	21905136	Welding throusers	48 - 50 - 52 - 54 - 56
<b>TIG GLOVES</b>	21905133	Professional welding gloves	09 - 10
<b>MIG/MMA GLOVES</b>	21905134	Professional welding gloves	10 - 11
<b>SPLIT LEATHER GLOVES</b>	21905177	Professional welding gloves	One-size-fits-all
<b>APRON</b>	21905176	Welding apron	One-size-fits-all

## FUME EXTRACTORS

	PART NUMBER	HOSE TYPE	Ø HOSE	HOSE LENGTH	FILTRATION EFFICIENCY	NOISE LEVEL
<b>PFE</b>	99900230	Flexible	55 mm	2000 mm	99 %	72 dBA
<b>MFE (NO HOSE)</b>	99900299	-	-	-	99 %	74 dBA
<b>MFE HD (NO HOSE)</b>	99900300	-	-	-	99,5 %	<= 70 dBA
<b>BRACCIO ARMOTECH</b>	99900301	Rigid	160 mm	3000 mm	-	-
<b>BRACCIO ARMOFLEX</b>	99900302	Flexible	160 mm	3000 mm	-	-

**4 SENSORS · STORM VISION 4.1 + HELVI BAG XL**
**99900269**



 Additional filter  
for INOX welding

Optical Class **1/1/1/1**  
 Filter size **133 x 114 x 9 mm**  
 Viewing area **97 x 62 mm**  
**4 Sensors · Light Shade 3.5**  
 Darkness Shade **5 - 8 / 9 - 13** variable  
 Grinding **YES DIN 4** Fixed  
 Protection Adjustment **Internal**, variable shade  
 UV/IR Protection up to **DIN 16**  
 Switching time from Light to Dark **1/25000s**  
 Switching time from Dark to Light **0.05 - 1.0s**  
 Sensitivity/Delay **adjustable** by digital control (**10 levels**)  
 Power Supply **Solar cells + 2 x CR2450 Lithium batteries**  
 ON/OFF: manual ON - Automatic OFF  
 Low Battery alarm **YES**, red pilot lamp  
 Min Amp/TIG Rating  $\geq$  **2A AC - DC**  
 True Color filter **YES**


**RESPIRATOR TECHNICAL DATA**

**2** air flow levels: **170 lpm** and **210 lpm**  
 Filter efficiency: **99,97%** · Battery life: **9 h (170 lpm)**  
 Recharge time: **1 h** · Weight: **1kg** · Approval: **EN12941- TH2t**


**TIG · MIG · MMA · PLASMA · GRINDING**
**SPARE PARTS**

EXTERNAL GLASS	21905076	133 x 114 x 1 mm
INTERNAL GLASS	21905079	96,9 x 65,7 x 1 mm
STANDARD BATTERY	21905155	-
EXTENDED BATTERY	21905156	-
EXTERNAL PROTECTION	21905159	-
FILTER PROTECTION	21905158K	(5 pieces KIT)
PARTICULATE FILTER	21905157	-
GAS FILTER	21905161	-



## 4 SENSORS · VISION 4.1 + HELMET BAG

21905147K



TRUE  
COLORS 

Optical Class **1/1/1**  
 Filter size **133 x 114 x 9 mm**  
 Viewing area **97 x 62 mm**  
**4 Sensors**  
 Light Shade **3.5**  
 Darkness Shade **5 - 8 / 9 - 13** variable  
 Grinding **YES DIN 4 Fixed**  
 Protection Adjustment **Internal**, variable shade  
 UV/IR Protection up to **DIN 16**  
 Switching time from Light to Dark **1/25000s**  
 Switching time from Dark to Light **0.05 - 1.0s**  
 Sensitivity/Delay **adjustable** by digital control (**10 levels**)  
 Power Supply **Solar cells + 2 x CR2450 Lithium batteries**  
 ON/OFF: manual ON - Automatic OFF  
 Low Battery alarm **YES**, red pilot lamp  
 Min Amp/TIG Rating  $\geq$  **2A AC - DC**  
 True Color filter **YES**



TIG · MIG · MMA · PLASMA · GRINDING

## SPARE PARTS

EXTERNAL GLASS	21905076	133 x 114 x 1 mm
INTERNAL GLASS	21905079	96,9 x 65,7 x 1 mm

## 4 SENSORS · SKY 4.0 + HELMET BAG

21905179K



TRUE  
COLORS 

Optical Class **1/1/1/2**  
 Filter size **110 x 90 x 9 mm**  
 Viewing area **100 x 53 mm**  
**4 Sensors**  
 Light Shade **4**  
 Darkness Shade **5 - 8 / 9 - 13** variable  
 Grinding **YES DIN 4 Fixed**  
 Protection Adjustment **External**, variable shade  
 UV/IR Protection up to **DIN 16**  
 Switching time from Light to Dark **1/25000s**  
 Switching time from Dark to Light **0.1 - 1.0s**  
 Sensitivity/Delay **adjustable** by infinite knob  
 Power Supply **Solar cells + 1 x CR2032 Lithium battery**  
 ON/OFF Automatic  
 Low Battery alarm **YES**, red pilot lamp  
 Min Amp/TIG Rating  $\geq$  **5A AC - DC**  
 True Color filter **YES**



TIG · MIG · MMA · PLASMA · GRINDING

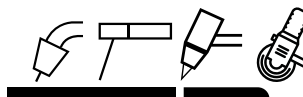
## SPARE PARTS

EXTERNAL GLASS	21905168	120 x 104 x 1 mm
INTERNAL GLASS	21905169	105,6 x 58 x 0,8 mm

**2 SENSORS · VISION 2.1 + HELMET BAG**
**21905100K**

**TRUE  
COLORS**

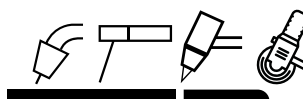
Optical Class **1/1/1/2**  
 Filter size **110 x 90 x 9 mm**  
 Viewing area **98 x 44 mm**  
**2 Sensors**  
 Light Shade **3.5**  
 Darkness Shade **9 - 13**  
 Grinding **YES**  
 Protection Adjustment **Internal**, variable shade  
 UV/IR Protection up to **DIN 16**  
 Switching time from Light to Dark **1/16000s**  
 Switching time from Dark to Light **0.1 - 1.0s**  
 Sensitivity/Delay **adjustable** by infinite knob  
 Power Supply **Solar cells** and **2 Alkaline AAA batteries**  
 ON/OFF Automatic  
 Low Battery alarm **YES**, red pilot lamp  
 Min Amp/TIG Rating  $\geq$  **5A AC - DC**  
 True Color filter **YES**


**MIG · MMA · PLASMA · GRINDING**
**SPARE PARTS**

<b>EXTERNAL GLASS</b>	<b>21905077</b>	114 x 100 x 1,5 mm
<b>INTERNAL GLASS</b>	<b>21905078</b>	95,9 x 47,2 x 1 mm

**2 SENSORS · SKY 2.0 + HELMET BAG**
**21905125K**


Optical Class **1/1/1/2**  
 Filter size **110 x 90 x 9 mm**  
 Viewing area **98 x 42 mm**  
**2 Sensors**  
 Light Shade **4**  
 Darkness Shade **9 - 13**  
 Grinding **YES**  
 Protection Adjustment **External**, variable shade  
 UV/IR Protection up to **DIN 16**  
 Switching time from Light to Dark **1/25000s**  
 Switching time from Dark to Light **0.1 - 1.0s**  
 Sensitivity/Delay **adjustable** by infinite knob  
 Power Supply **Solar cells** and **1 CR2032 batteries**  
 ON/OFF Automatic  
 Low Battery alarm **YES**, red pilot lamp  
 Min Amp/TIG Rating  $\geq$  **10A AC - DC**  
 True Color filter **NO**


**MIG · MMA · PLASMA · GRINDING**
**SPARE PARTS**

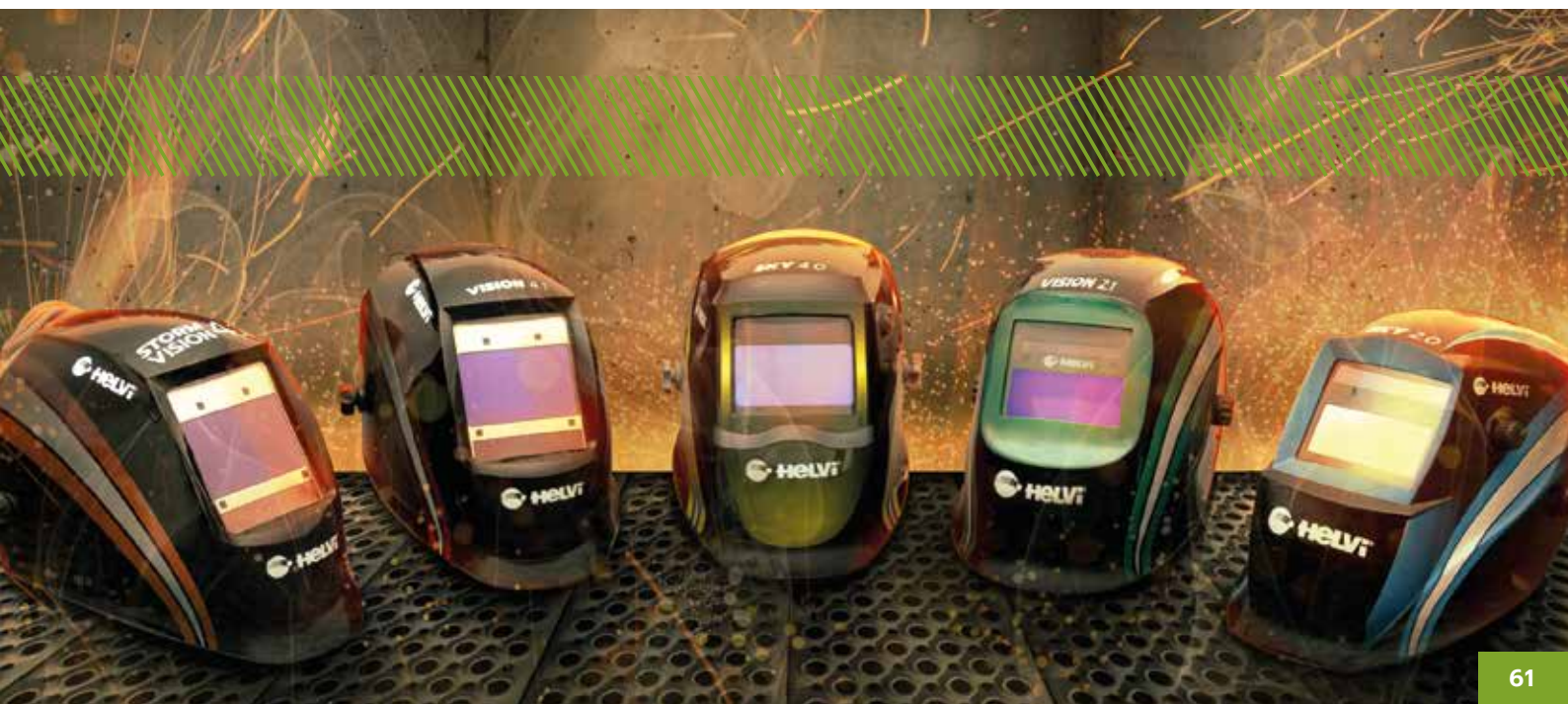
<b>EXTERNAL GLASS</b>	<b>21905168</b>	120 x 104 mm
<b>INTERNAL GLASS</b>	<b>21905129</b>	101 x 49 mm

**MANUAL CONTROL · MIRAGE**
**21905182**


Filter size **110 x 90 x 5 mm**  
 Viewing area **110 x 90 mm**  
 Darkness Shade **DIN11**  
 Grinding **YES**  
 UV/IR Protection up to **DIN 16**


**MIG · MMA · PLASMA · GRINDING**
**SPARE PARTS**

EXTERNAL GLASS	21905184	110,5 x 93 mm
INTERNAL GLASS	21905183	110 x 90 x 5 mm

**HELMET BAG**
**21905181**






1

2

Protective clothing against heat risks designed specifically for welding.

Made of 100% cotton with permanent treatment PROBAN® flame retardant.

**Materials:** 100% cotton, weight 340 g/m<sup>2</sup>, FL PROBAN® permanent treatment

Performance was checked after 50 cycles of washing and are still certified the same.

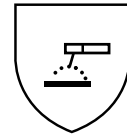
PROBAN® is a technological process of controlled quality which provides fabrics with flame retardant properties suitable for long term use.

PROBAN® fabrics resist regeneration / recycling and dry cleaning processes. Protection against heat risks in different work environments is guaranteed for a long time.

1



EN ISO 11612  
A1 A2 B1 C1 F1



EN ISO 11611  
class 1

1

### WELDING JACKET



#### AVAILABLE SIZES

48	50	52	54	56	•
M	M/L	L	XL	XXL	

21905135

2

### WELDING TROUSERS



#### AVAILABLE SIZES

48	50	52	54	56	•
M	M/L	L	XL	XXL	

21905136

3

2

### 3 WELDING GLOVES

#### FOR TIG WELDING



EN: 388:2016



3122

EN: 407:2004



433X2X

#### AVAILABLE SIZES

09 · 10

21905133

#### FOR MIG/MMA WELDING



EN: 388:2016



3122

EN: 407:2004



433X2X

#### AVAILABLE SIZES

10 · 11

21905134

#### SPLIT LEATHER FOR WELDING



EN: 388:2016



3222

EN: 407:2004



413X4X

#### AVAILABLE SIZES

ONE SIZE FITS ALL

21905177

### 4 WELDING APRON



EN: 388:2016



3222

EN: 407:2004



413X4X

EN ISO 11611:2015



Class 2 A1



#### AVAILABLE SIZES

ONE SIZE FITS ALL

21905176

**PFE · Portable fume extractor**

Input voltage	1ph · 230V 50Hz
Hose	<b>Flexible</b>
Ø Hose	55 mm
Hose length	2000 mm
Motor power	1,1 KW
Airflow	250 m³/h
Extraction capacity	110 m³/h
Filter type	<b>3 stages filter</b>
Filtration efficiency	99%
Noise level	72 dBA
Dimensions (LxWxH)	520x255x470 mm (without hose)
Box (LxWxH)	800x600x450 mm
Weight gross/net	23/20 Kg
Part number	99900230


**MFE · Mobile fume extractor**

Input voltage	1ph · 230V 50Hz
Motor power	1,1 KW
Airflow	2500 m³/h
Extraction capacity	1400 m³/h
Filter type	<b>HEPA filter</b> (Light-medium duty cycle)
Filtration efficiency	99%
Noise level	74 dBA
Dimensions (LxWxH)	1100x523x830 mm
Box (LxWxH)	1150x550x1050 mm
Weight gross/net	80 / 70 Kg
Part number	99900299


**MFE HD · Mobile fume extractor**

Input voltage	1ph · 230V 50Hz
Motor power	2500 m³/h
Airflow	1480 m³/h
Extraction capacity	1400 m³/h
Filter type	<b>HEPA filter</b> (Light-medium duty cycle)
Filtration efficiency	99.5%
Noise level	<= 70 dBA
Dimensions (LxWxH)	600x800x1200 mm
Box (LxWxH)	660x840x1380 mm
Weight gross/net	100 / 90 Kg
Part number	99900300





	ARMOTECH	ARMOFLEX
Hose	Rigid	Flexible
Ø Hose	160 mm	160 mm
Hose length	3000 mm	3000 mm
Box (LxWxH)	1610x550x380 mm	1610x550x380 mm
Gross weight	21 Kg	16 Kg
Part number	99900301	99900302



ARMOTECH



ARMOFLEX

### 3 STAGES FILTER (PFE)



- 1 ANTI-SPARKS METALLIC FILTER
- 2 FILTER CARTRIDGE - Efficiency 99%
- 3 CARBON FILTER

#### SPARE PARTS

- |   |          |                         |
|---|----------|-------------------------|
| 1 | 99900242 | Dim.: 240x337x12 mm     |
| 2 | 99900243 | Dim.: Ø 195mm · L=28 mm |
| 3 | 99900244 | Dim.: 240x292 mm        |

### 3 STAGES HEPA FILTER (MFE · MFE HD)



- 1 **METALLIC FILTER CELL + CORRUGATED**  
 Material: Aluminum fiber  
 Regeneration: Yes, washable  


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 Material: Polyester fiber  
 Regeneration: Yes, by shacking
- 2 **RIGID HEPA GLASS MICROFIBER POCKET FILTER**  
 Material: Glass fiber EU12  
 Regeneration: NO (needs replacement)

#### MFE SPARE PARTS

- |   |          |                           |
|---|----------|---------------------------|
| 1 | 99900305 | Dimensions: 490x592x48 mm |
| 2 | 99900238 | Dimensions: 490x592x48 mm |

#### MFE HD SPARE PARTS

- |   |          |                           |
|---|----------|---------------------------|
| 1 | 99900306 | Dimensions: 490x592x98 mm |
| 2 | 99900238 | Dimensions: 490x592x98 mm |

#### OPTIONAL

- |          |  |
|----------|--|
| 99900241 | <b>CARBON FILTER (Couple)</b><br>Dimensions: 292x648x48 mm |
|----------|--|



# ACCESSORIES AND SPARE PARTS

# ○ ACCESSORIES & SPARE PARTS

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**GENERAL ACCESSORIES**
**BLISTER**

	<b>21915002B5</b>	Electrode blister • <b>Rutile</b> • <b>2,0</b> mm • <b>30</b> pcs/blister • sold in carton box of <b>5 blisters</b>
	<b>21915003B5</b>	Electrode blister • <b>Rutile</b> • <b>2,5</b> mm • <b>20</b> pcs/blister • sold in carton box of <b>5 blisters</b>
	<b>21915006B5</b>	Electrode blister • <b>Rutile</b> • <b>3,25</b> mm • <b>15</b> pcs/blister • sold in carton box of <b>5 blisters</b>
	<b>21910109B5</b>	Wire reel blister • <b>Flux core</b> • $\varnothing$ <b>0,9</b> mm • <b>1,0</b> Kg • sold in carton box of <b>5 blisters</b>
	<b>21910108B5</b>	Wire reel blister • <b>Mild Steel SG2</b> • $\varnothing$ <b>0,8</b> mm • <b>1,0</b> Kg • sold in carton box of <b>5 blisters</b>
	<b>21910047B5</b>	Wire reel blister • <b>AlMg5 5356</b> • $\varnothing$ <b>0,8</b> mm • <b>0,5</b> Kg • sold in carton box of <b>5 blisters</b>
	<b>21910088B5</b>	Wire reel blister • <b>AISi5 4043</b> • $\varnothing$ <b>0,8</b> mm • <b>0,5</b> Kg • sold in carton box of <b>5 blisters</b>
	<b>21910089B5</b>	Wire reel blister • <b>AISi5 4043</b> • $\varnothing$ <b>1,0</b> mm • <b>0,5</b> Kg • sold in carton box of <b>5 blisters</b>
	<b>21910111B5</b>	Wire reel blister • <b>Inox 308L Si</b> • $\varnothing$ <b>0,8</b> mm • <b>0,5</b> Kg • sold in carton box of <b>5 blisters</b>
	<b>21910056B5</b>	Wire reel blister • <b>CuSi3</b> • $\varnothing$ <b>0,8</b> mm • <b>0,9</b> Kg • sold in carton box of <b>5 blister</b>



## GENERAL ACCESSORIES

## MAGNETIC HOLDERS

	21905123	Arow magnetic holder · holds up to 22 Kg
	21905124	Arow magnetic holder · holds up to 34 Kg
	21905140	Magnetic holder with ON/OFF function · holds up to 40 Kg
	21905141	Adjustable magnetic holder · holds up to 12 Kg
	21905142	Adjustable magnetic holder · holds up to 15 Kg
	21905173	Magnetic MIG torch holder · BLUE
	21905174	Magnetic TIG torch holder · YELLOW
	21905175	Magnetic MMA torch holder · RED

## GENERAL ACCESSORIES

## BORSE HELVI

	<b>21905178K</b>	HELVI Bag M Dim. 450x220x270 mm	Sparc Range Galileo 179 · 219
	<b>21905139K</b>	HELVI Bag XL Dim. 540x225x250 mm	Galileo TIG 219 HF

## WELDING STATION

	<b>99900309</b>	Welding station
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## GENERAL ACCESSORIES

### TROLLEYS

	AUTOSTAR 300	AUTOSTAR 500	EXPLORER 120	GALILEO TIG 211 Easy AC/DC	FOX 165	FOX 185	FOX 191	FOX 211	SPOTCAR 4000	SPOTCAR 5000	SPOTCAR ALU 33	SPOTCAR ALU 66
TROLLEY 1	•	•							•	•	•	•
TROLLEY 2 · EXPLORER			•									
TROLLEY 3					•	•	•	•				
TROLLEY 4 · HD AIR				•	•	•	•	•				

TROLLEY 1		TROLLEY 2 · EXPLORER		TROLLEY 3		TROLLEY 4 · HD AIR	
<b>Dimensions (LxWxH)</b>	470 x 520 x 770 mm	<b>Dimensions (LxWxH)</b>	470 x 520 x 790 mm	<b>Dimensions (LxWxH)</b>	520 x 450 x 1060 mm	<b>Dimensions (LxWxH)</b>	950 x 435 x 975 mm
<b>Box</b>	490 x 220 x 795 mm	<b>Box</b>	490 x 220 x 795 mm	<b>Box</b>	380 x 365 x 1065 mm	<b>Box</b>	380 x 365 x 1065 mm
<b>Part number</b>	<b>99900194A</b>	<b>Part number</b>	<b>99900260K</b>	<b>Part number</b>	<b>99900171A</b>	<b>Part number</b>	<b>99900258</b>

**CHARGERS & STARTERS ACCESSORIES & SPARE PARTS**
**SPARE PARTS**

	<b>22220044</b>	Fuse • <b>80 A</b> • (min 5 pcs)	Speedy 150
	<b>22220047</b>	Fuse • <b>100 A</b> • (min 5 pcs)	Speedy 250
	<b>22220048</b>	Fuse • <b>120 A</b> • (min 5 pcs)	Rapid 280 · 380
	<b>22220031</b>	Fuse • <b>75 A</b> • (min 5 pcs)	Speedy 430
	<b>22220030</b>	Fuse • <b>100 A</b> • (min 5 pcs)	Rapid 480 · Autostar 500 (x2)
	<b>22220029</b>	Fuse • <b>120 A</b> • (min 5 pcs)	Autostar 300 · Sprint Car 341 · Digicar 450E
	<b>22220008</b>	Fuse • <b>200 A</b> • (min 5 pcs)	Sprint Car 441 · 540 · Digicar 540E - 750E
	<b>22220011</b>	Fuse • <b>300 A</b> • (min 5 pcs)	Sprint car 640 · Autostar 701 · Digicar 1100E
	<b>22220067</b>	Fuse • <b>400 A</b> • (min 5 pcs)	Autostar 1001 · Autostar 2000 (x2)
	<b>22220013</b>	Fuse • <b>500 A</b> • (min 5 pcs)	Autostar 1300
	<b>99090032</b>	Fuse • <b>500 A</b> · 55mm	Boosty Range

**ACCESSORIES**



	<b>04600065</b>	Clamps for battery chargers (red + black) • KIT <b>40 A</b>	Artik 15 - 22 · Progress 14 - 17 - 20 Automatic 15
	<b>04600066</b>	Clamps for battery chargers (red + black) • KIT <b>60 A</b>	Automatic 18 - 30 · Speedy 150 - 250 Progress 25 · Artik 33
	<b>04600067</b>	Clamps for battery chargers (red + black) • KIT <b>120 A</b>	Progress 35B · Sprint Car 341 - 441 Sprint Car 540 - 640 · Rapid 280 - 380 - 430 Digicar 450E - 540E - 750E - 1100E
	<b>04600406</b>	Clamps for battery chargers (red + black) • <b>F2E</b>	Autostar 300 - 500
	<b>04600407</b>	Clamps for battery chargers (red + black) • <b>F12</b>	Sprint Car 540 · Digicar 750E - Autostar 701 - 1001
	<b>04600405</b>	Clamps for battery chargers (red + black) • <b>P280</b>	Autostar 1300 - 2000

**MMA · TIG ACCESSORIES**
**All Welding Kits include:** Mask · Ground cable · Electrode holder · Brush - Hammer

	<b>99900037</b>	Arc welding KIT • <b>16 mm<sup>2</sup></b> <b>3 + 2 mt</b> · conn. <b>25 mm<sup>2</sup></b>	Sparc 146 - 186 - 226
	<b>99900014</b>	Arc welding KIT • <b>25 mm<sup>2</sup></b> <b>3 + 2 mt</b> · conn. <b>25 mm<sup>2</sup></b>	Sparc 186 - 226
	<b>99900099</b>	Arc welding KIT • <b>25 mm<sup>2</sup></b> <b>3 + 2 mt</b> · conn. <b>50 mm<sup>2</sup></b>	Galileo 179 - 219 - 201HF Galileo TIG 219HF - 211 Easy AC/DC
	<b>99810021</b>	Foot remote control <b>12 pins</b> · <b>5 m</b>	Galileo TIG 211 Easy AC/DC








## MMA · TIG ACCESSORIES

## GROUND CABLES &amp; WELDING CABLES

	<b>43210138K</b>	Ground cable with clamp kit for conn. <b>25 mm<sup>2</sup> · 16 mm<sup>2</sup> · 2,0 mt</b>	mini Fox 161 · Fox 165 - 185 - 191 Sparc 146 - 186 - 226 · Puma 191
	<b>43210170K</b>	Ground cable with clamp kit for conn. <b>50 mm<sup>2</sup> · 25 mm<sup>2</sup> · 2,0 mt</b>	Galileo 179 - 219 · TIG 219 HF Galileo TIG 211 Easy AC/DC
	<b>43210132K</b>	Ground cable with clamp kit for conn. <b>50 mm<sup>2</sup> · 25 mm<sup>2</sup> · 3,0 mt</b>	Fox 211 · Puma 256 - 278
	<b>43210142K</b>	Ground cable with clamp kit for conn. <b>50 mm<sup>2</sup> · 35 mm<sup>2</sup> · 3,0 mt</b>	Puma 298
	<b>43205028K</b>	Welding cable with electrode holder conn. <b>25 mm<sup>2</sup> · 16 mm<sup>2</sup> · 3,0 mt</b>	Sparc 186 - 226 · Puma 191 Fox 165 - 185 - 191
	<b>43205049K</b>	Welding cable with electrode holder conn. <b>50 mm<sup>2</sup> · 16 mm<sup>2</sup> · 3,0 mt</b>	Fox 211
	<b>43205040K</b>	Welding cable with electrode holder conn. <b>50 mm<sup>2</sup> · 25 mm<sup>2</sup> · 3,0 mt</b>	Galileo 179 - 219 · TIG 219 HF Fox 211 · Puma 256 - 298
	<b>22110007</b>	Earth clamp <b>Type 200A · Kit 160 A - 180 A</b>	Fox 165 - 185 - 191 · Sparc 146 · Puma 191
	<b>22110033</b>	Earth clamp <b>Type 300A · Kit 250 A - 300 A</b>	Sparc 186 - 226 Galileo 179 - 219 · Galileo TIG 219HF Fox 211 · Puma 256 - 278 - 298
	<b>22110011</b>	Electrod Holder <b>Type 352 · Kit 140 A - 160 A</b>	Sparc 146 · Fox 165
	<b>22110010</b>	Electrod Holder <b>Type 202 · Kit 180 A - 250 A - 300 A</b>	Sparc 186 - 226 - Fox 185 - 191 - 211 Galileo 179 - 219 · TIG 219HF Puma 191 - 256 - 278 - 298
	<b>22100001</b>	Plug · <b>25 mm<sup>2</sup></b>	-
	<b>22100003</b>	Plug · <b>50 mm<sup>2</sup></b>	-
	<b>22100010</b>	Plug · <b>95 mm<sup>2</sup></b>	-
	<b>22100020</b>	Connector adapter · <b>25-50 mm<sup>2</sup></b>	-
	<b>10210057</b>	Welding cable · <b>16mm<sup>2</sup></b> <b>Lenght on demand</b>	-
	<b>10210059</b>	Welding cable · <b>25mm<sup>2</sup></b> <b>Lenght on demand</b>	-



**TIG · MIG/MAG ACCESSORIES**
**GAS WELDING**

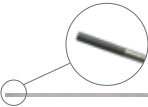
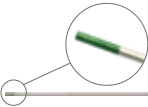



	<b>22905114</b>	Zero compensated Argon flowmeter regulator	Italy / England
	<b>22905111</b>	Pressure regulator Argon double stage with flowmeter	Italy / England
	<b>22905090K</b>	Pressure regulator ECO mini CO <sub>2</sub> + gas bottle adapter Argon / CO <sub>2</sub>	Italy / England
	<b>22905029K</b>	Pressure regulator Maxi CO <sub>2</sub> + gas bottle adapter Argon / CO <sub>2</sub>	Italy / England
	<b>22905118</b>	Pressure regulator Micro 130 bar for disposable cylinders	Fitting M10
	<b>22905115K</b>	Pressure regulator for disposable cylinders	Fitting M10
	<b>21900001</b>	Disposable gas cylinders CO <sub>2</sub>	Fitting M10
	<b>21900002</b>	Disposable gas cylinders Argon	Fitting M10
	<b>21900003</b>	Disposable gas cylinders Argon CO <sub>2</sub>	Fitting M10

## TIG ACCESSORIES



## ACCESSORIES · TIG TORCHES

	<b>23020173</b>	<b>Tig 17V</b> · 4 mt · with gas valve · conn. 25 mm <sup>2</sup> KIT consumables $\varnothing$ 1,6 mm	Fox 185 Puma 191
	<b>23020159</b>	<b>Tig 17V</b> · 4 mt · with gas valve · conn. 50 mm <sup>2</sup> KIT consumables $\varnothing$ 1,6 mm	Galileo 179 - 219
	<b>23020199</b>	<b>Tig 26V</b> · 4 mt · with gas valve · conn. 50 mm <sup>2</sup> KIT consumables $\varnothing$ 2,4 mm	Fox 211 Puma 256 - 298
	<b>23020157</b>	<b>ExperTig 26</b> · 4 mt · conn. 50 mm <sup>2</sup> · 3 Pin KIT consumables $\varnothing$ 2,4 mm	Galileo TIG 219HF
	<b>23020176</b>	<b>ExperTig 26</b> · 4 mt · conn. 50 mm <sup>2</sup> · 12 Pin KIT consumables $\varnothing$ 2,4 mm	Galileo TIG 211 Easy AC/DC
	<b>23020189</b>	<b>ExperTig 26</b> · 8 mt · conn. 50 mm <sup>2</sup> · 12 Pin KIT consumables $\varnothing$ 2,4 mm	Galileo TIG 211 Easy AC/DC
	<b>23020409</b>	<b>Tig26</b> · 4 mt · conn. 50 mm <sup>2</sup> · 3 Pin KIT consumables $\varnothing$ 2,4 mm	Galileo TIG 219HF
	<b>23020410</b>	<b>Tig26</b> · 4 mt · conn. 50 mm <sup>2</sup> · 12 Pin KIT consumables $\varnothing$ 2,4 mm	Galileo TIG 211 Easy AC/DC

## SPARE PARTS · TIG CONSUMABLES

	<b>23025006</b>	Cerium tungsten electrode (grey) · $\varnothing$ 1,6 mm · Lots of 10 pcs
	<b>23025015</b>	Cerium tungsten electrode (grey) · $\varnothing$ 2,4 mm · Lots of 10 pcs
	<b>23025019</b>	Cerium tungsten electrode (grey) · $\varnothing$ 3,2 mm · Lots of 10 pcs
	<b>23025007</b>	Pure tungsten electrode (green) · $\varnothing$ 1,6 mm · Lots of 10 pcs
	<b>23025016</b>	Pure tungsten electrode (green) · $\varnothing$ 2,4 mm · Lots of 10 pcs
	<b>23025020</b>	Pure tungsten electrode (green) · $\varnothing$ 3,2 mm · Lots of 10 pcs
	<b>23025004</b>	TIG collet · $\varnothing$ 1,6 mm · Lots of 3 pcs
	<b>23025013</b>	TIG collet · $\varnothing$ 2,4 mm · Lots of 3 pcs
	<b>23025017</b>	TIG collet · $\varnothing$ 3,2 mm · Lots of 3 pcs
	<b>23025005</b>	TIG collet body · $\varnothing$ 1,6 mm · Lots of 3 pcs
	<b>23025014</b>	TIG collet body · $\varnothing$ 2,4 mm · Lots of 3 pcs
	<b>23025018</b>	TIG collet body · $\varnothing$ 3,2 mm · Lots of 3 pcs
	<b>23025008</b>	Ceramic nozzle · GR.6 · $\varnothing$ 9,8 mm · Lots of 5 pcs
	<b>23025009</b>	Ceramic nozzle · GR.8 · $\varnothing$ 12,7 mm · Lots of 5 pcs

## TIG TORCH CONNECTOR


	<b>22105126</b>	TIG torch male connector · 3 pins
	<b>22105166</b>	TIG torch male connector · 12 pins

## MIG/MAG ACCESSORIES

## ACCESSORIES · MIG/MAG TORCHES

	<b>23000132</b>	<b>MIG TORCH TN</b> 2,7 m · Black · Direct connection · Gas/No Gas	Fox 165
	<b>23000142K</b>	<b>MIG TORCH TN 14</b> 2 m · Black · Direct connection · Gas/No Gas	mini Fox 161
	<b>23000491</b>	<b>MIG TORCH 15</b> 3 m · Grey/black · Euro connection	Fox 185 - 191 Puma 191
	<b>23000494</b>	<b>TRAFIMET ERGO PLUS 25</b> 3 m · Black/blue · Euro connection	Fox 211 Puma 256 - 278 - 298
	<b>23000495</b>	<b>TRAFIMET ERGO PLUS 25</b> 4 m · Black/blue · Euro connection	Fox 211 Puma 256 - 278 - 298

## ALUMINIUM KIT FOR MIG TORCH 23000494






	<b>04600384</b>	<b>23005443</b>	Contact tip Ø 1,0 mm · M8 · AL	Fox 211 Puma 256 - 278 - 298
		<b>23005444</b>	Gas diffuser · M8	
		<b>23005490</b>	Wire Liner · Grey · Graphite Ø 1,0 - 1,2 mm · 3,5 m · Brass terminal	
		<b>23005562</b>	Brass wire inlet tube Ø 4,4 x 5 mm · L = 150 mm	








## MIG/MAG ACCESSORIES

## SPARE PARTS · MIG/MAG CONSUMABLES







## MIG TORCH 23000132 CONSUMABLES

	<b>23005491D</b>	Torch neck
	<b>23005516</b>	Torch neck without gas valve
	<b>23005018</b>	Contact tip · $\varnothing$ 0,6 mm lots of 20 pcs
	<b>23005019</b>	Contact tip · $\varnothing$ 0,8 mm lots of 20 pcs
	<b>23005020</b>	Contact tip · $\varnothing$ 1,0 mm lots of 20 pcs
	<b>23005021</b>	Gas nozzle · $\varnothing$ 12 mm lots of 10 pcs
	<b>23005096</b>	Gas diffuser · lots of 10 pcs






## MIG TORCH 23000142K CONSUMABLES

	<b>23005491D</b>	Torch neck
	<b>23005516</b>	Torch neck without gas valve
	<b>23005018</b>	Contact tip · $\varnothing$ 0,6 mm lots of 20 pcs
	<b>23005019</b>	Contact tip · $\varnothing$ 0,8 mm lots of 20 pcs
	<b>23005182</b>	Contact tip · $\varnothing$ 0,9 mm lots of 20 pcs
	<b>23005021</b>	Gas nozzle · $\varnothing$ 12 mm lots of 10 pcs
	<b>23005096</b>	Gas diffuser · lots of 10 pcs







## MIG TORCH 23000491 CONSUMABLES

	<b>23005102</b>	Torch neck
	<b>23005018</b>	Contact tip · $\varnothing$ 0,6 mm lots of 20 pcs
	<b>23005019</b>	Contact tip · $\varnothing$ 0,8 mm lots of 20 pcs
	<b>23005020</b>	Contact tip · $\varnothing$ 1,0 mm lots of 20 pcs
	<b>23005029</b>	Contact tip · $\varnothing$ 1,2 mm lots of 20 pcs
	<b>23005448</b>	Contact tip · $\varnothing$ 1,0 mm for Aluminium · lots of 20 pcs
	<b>23005117</b>	Ugello · $\varnothing$ 9,5 mm · lots of 10 pcs
	<b>23005021</b>	Ugello · $\varnothing$ 12 mm · lots of 10 pcs
	<b>23005022</b>	Spot welding nozzle lots of 10 pcs
	<b>23005092</b>	Gas diffuser · lots of 10 pcs
	<b>23005562</b>	Brass wire inlet tube $\varnothing$ 4,4 x 5 mm · L = 150 mm

## MIG TORCH 23000494 - 23000495 CONSUMABLES

	<b>23005619</b>	Torch neck
	<b>23005070</b>	M6 Contact tip · $\varnothing$ 0,6 mm lots of 20 pcs
	<b>23005038</b>	M6 Contact tip · $\varnothing$ 0,8 mm lots of 20 pcs
	<b>23005039</b>	M6 Contact tip · $\varnothing$ 1,0 mm lots of 20 pcs
	<b>23005040</b>	M6 Contact tip · $\varnothing$ 1,2 mm lots of 20 pcs
	<b>23005112</b>	M6 Contact tip · $\varnothing$ 1,6 mm lots of 20 pcs
		<b>23005036</b>
	<b>23005037</b>	Spot welding nozzle lots of 5 pcs
	<b>23005034</b>	Gas diffuser · lots of 10 pcs
	<b>23005562</b>	Brass wire inlet tube $\varnothing$ 4,4 x 5 mm · L = 150 mm

## MIG TORCH 23000484 CONSUMABLES

	<b>23005114</b>	Torch neck
	<b>23005442</b>	M8 Contact tip M8 · $\varnothing$ 0,8 mm lots of 10 pcs
	<b>23005443</b>	M8 Contact tip M8 · $\varnothing$ 1,0 mm lots of 10 pcs
	<b>23005447</b>	M8 Contact tip M8 · $\varnothing$ 1,2 mm lots of 10 pcs
	<b>23005036</b>	Gas nozzle · $\varnothing$ 15 mm · lots of 10 pcs
	<b>23005037</b>	Spot welding nozzle lotti da 5 pz
	<b>23005444</b>	Gas diffuser · lots of 5 pcs
	<b>23005562</b>	Brass wire inlet tube $\varnothing$ 4,4 x 5 mm · L = 150 mm

**MIG/MAG ACCESSORIES**
**ALUMINIUM KIT FOR FOX RANGE**


	<b>04600557</b>	<b>23005035</b>	Wire liner · Red · <b>Teflon</b> $\varnothing$ 1,0 - 1,2 mm · 3,3 m	Fox 185
		<b>33805104</b>	Drive roll for ALU 0,8 - 1,0 mm · $\varnothing$ 30 mm	
		<b>23005562</b>	Brass wire inlet tube $\varnothing$ 4,4 x 5 mm · L = 150 mm	
	<b>04600589</b>	<b>23005442</b>	Contact tip · $\varnothing$ 0,8 mm · M8 · AL	Fox 211
		<b>23005443</b>	Contact tip · $\varnothing$ 1,0 mm · M8 · AL	
		<b>23005444</b>	Gas diffuser · M8	
		<b>23005490</b>	Wire liner · Grey · <b>Graphite</b> $\varnothing$ 1,0 - 1,2 mm · 3,5 m · brass terminal	
		<b>33805104</b>	Drive roll for ALU 0,8 - 1,0 mm · $\varnothing$ 30 mm	
		<b>23005562</b>	Brass wire inlet tube $\varnothing$ 4,4 x 5 mm · L = 150 mm	

**SPARE PARTS · WIRE LINERS**






	<b>23005025</b>	Wire liner · $\varnothing$ 0,8 - 1,0 mm · 3,3 m · <b>Steel</b> · Blue	Torch 15
	<b>23005041</b>	Wire liner · $\varnothing$ 1,0 - 1,2 mm · 3 m · <b>Steel</b> · Red	Torch 25
	<b>23005106</b>	Wire liner · $\varnothing$ 1,0 - 1,2 mm · 5 m · <b>Steel</b> · Red	Torch 25
	<b>23005111</b>	Wire liner · $\varnothing$ 1,2 - 1,6 mm · 5 m · <b>Steel</b> · Yellow	Torch 25
	<b>23005035</b>	Wire liner · $\varnothing$ 1,0 - 1,2 mm · 3,3 m · <b>Teflon</b> · Red · for Stainless steel	Torch 25
	<b>23005135</b>	Wire liner · $\varnothing$ 1,0 - 1,2 mm · 5,3 m · <b>Teflon</b> · Red · for Stainless steel	Torch 25
	<b>23005586</b>	Wire liner · $\varnothing$ 1,0 - 1,2 mm · 3,5 m · <b>Graphite</b> · Grey · for Stainless steel	Torch 25

## MIG/MAG ACCESSORIES


## WELDING WIRE REELS Ø 300 mm

	21910006	SG2 · Copper coated steel wire · Ø 0,6 · 15 Kg
	21910007	SG2 · Copper coated steel wire · Ø 0,8 · 15 Kg
	21910008	SG2 · Copper coated steel wire · Ø 1,0 · 15 Kg
	21910025	SG2 · Copper coated steel wire · Ø 1,2 · 15 Kg
	21910013	308 LSI · Stainless steel wire · Ø 0,8 · 15 Kg
	21910026	Aluminium wire · Ø 0,8 · 7,2 Kg

## WELDING WIRE REELS Ø 200 MM




	21910003	SG2 · Copper coated steel wire · Ø 0,6 · 5 Kg
	21910004	SG2 · Copper coated steel wire · Ø 0,8 · 5 Kg
	21910005	SG2 · Copper coated steel wire · Ø 1,0 · 5 Kg
	21910090	SG2 · Copper coated steel wire · Ø 0,8 · 5 Kg
	21910083	308 LSI · Stainless steel wire · Ø 0,8 · 5 Kg
	21910084	316 LSI · Stainless steel wire · Ø 0,8 · 5 Kg
	21910082	AlMg5 (5356) · Aluminium wire · Ø 0,8 · 2 Kg
	21910086	AlMg5 (5356) · Aluminium wire · Ø 1,0 · 2 Kg
	21910092	AlMg5 (5356) · Aluminium wire · Ø 1,2 · 2 Kg
	21910081	AlSi5 (4043) · Aluminium wire · Ø 0,8 · 2 Kg
	21910085	AlSi5 (4043) · Aluminium wire · Ø 1,0 · 2 Kg
	21910093	AlSi5 (4043) · Aluminium wire · Ø 1,2 · 2 Kg
	21910075	CuSi <sub>3</sub> Wire · Ø 0,8 · 2 Kg
	21910087	CuSi <sub>3</sub> Wire · Ø 0,8 · 5 Kg
	21910014	Flux-cored wire · Ø 0,9 · 4,5 Kg

## SPOOL HOLDER






	21690880	Spool holder Ø 50 mm Adaptor for metallic coils
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**MIG/MAG ACCESSORIES**
**DRIVE ROLLS FOR PLASTIC WIRE FEEDERS**

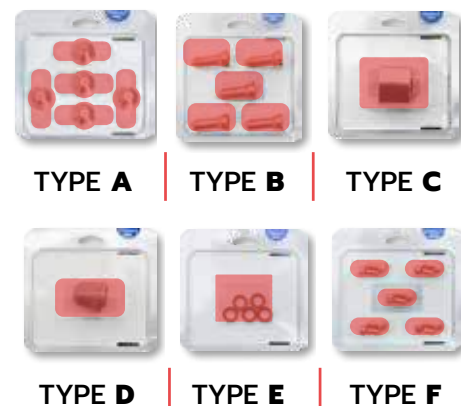
	<b>33805074</b>	Drive roll · for steel & stainless steel <b>0,6 - 0,8/0,9 mm · Ø 25 mm</b> · Knurled groove	Mini-Fox Fox 165
	<b>33805023</b>	Drive roll · for steel & stainless steel <b>0,6 - 0,8/0,9 mm · Ø 30 mm</b> · tempered	Fox 191
	<b>33805128</b>	Drive roll · for aluminium <b>0,8 - 1,0 mm · Ø 30 mm</b>	Fox 191

**DRIVE ROLLS FOR METALLIC WIRE FEEDERS**

	<b>33805007</b>	Wire block roll <b>Ø 30 mm</b> · lots of 5 pcs	Fox 185 - 211 Puma 191 - 256 - 278 -298
	<b>33805003</b>	Drive roll · for steel & stainless steel <b>0,6 - 0,8 mm · Ø 30 mm</b>	Fox 185 - 211 Puma 191 - 256 - 278 -298
	<b>33805071</b>	Drive roll · for steel & stainless steel <b>0,6 - 0,9 mm · Ø 30 mm</b>	Fox 185 - 211 Puma 191 - 256 - 278 -298
	<b>33805101</b>	Drive roll · for steel & stainless steel <b>0,8 - 1,0 mm · Ø 30 mm</b>	Fox 185 - 211 Puma 191 - 256 - 278 -298
	<b>33805005</b>	Drive roll · for steel & stainless steel <b>1,0 - 1,2 mm · Ø 30 mm</b>	Fox 185 - 211 Puma 191 - 256 - 278 -298
	<b>33805067</b>	Drive roll · for flux-core · <b>1,0 - 1,2 mm</b> <b>Ø 30 mm</b> · Knurled groove	Fox 185 - 211 Puma 191 - 256 - 278 -298
	<b>33805104</b>	Drive roll · for aluminium <b>0,8 - 1,0 mm · Ø 30 mm</b>	Fox 185 - 211 Puma 191 - 256 - 278 -298

## PLASMA CUTTING ACCESSORIES

### PLASMA CONSUMABLES' BLISTER TYPE

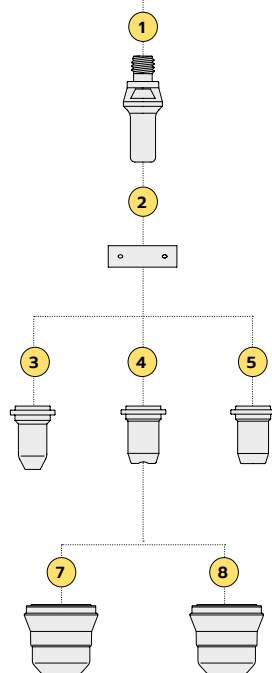


### PLASMA CUTTING MANUAL TORCH

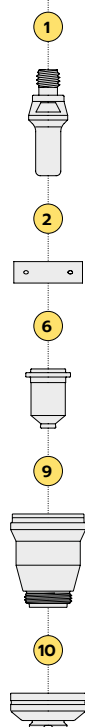


Suitable for:	COMBI PC 302K	99830015
<b>PT 40C</b>	40 A - 4m - Direct conn.	<b>23010067</b>
Consumable KIT (Pos.): 1 · 2 · 4 · 7		
Suitable for:	PC 33	99830024
	PC 43	99830019
<b>PT 40</b>	40 A - 4m - Direct conn.	<b>23010070</b>
Consumable KIT (Pos.): 1 · 2 · 4 · 8 - per PC 33		
Consumable KIT (Pos.): 1 · 2 · 5 · 8 - per PC 43		

#### Cutting 40 A



#### High performance cutting 40 A














#### SPARE PARTS / CONSUMABLES

Pos.	Description	Quantity	Part number
1	Electrode	10 pcs	23015187BH
2	Gas diffuser	5 pcs	23015179BH
3	Tip 10/20 A	10 pcs	23015189BH
4	Tip 20/30 A	10 pcs	23015186BH
5	Tip 30/40 A	10 pcs	23015224BH
6	Contact tip 30/40 A	10 pcs	23015349BH
7	Retaining cap · 2 holes (compressor)	1 pc	23015182BH
8	Retaining cap	1 pc	23015188BH
9	Retaining cap	1 pc	23015347BH
10	Shield cap	2 pcs	23015348BH

#### COMPASS KIT

	23015211	180,00 €
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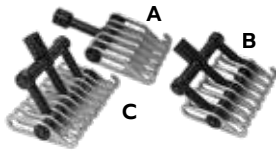




**SPOT WELDING ACCESSORIES**
**SPOT CAR EVO 4000 · 5000**

	<b>99920218</b>	Gun · <b>50 mm<sup>2</sup></b> · <b>2 m</b> · conn. <b>3 pins</b>	Spotcar EVO 4000	
	<b>99920223</b>	Gun · <b>70 mm<sup>2</sup></b> · <b>2 m</b> · conn. <b>3 pins</b>	Spotcar EVO 5000	
	<b>99920108</b>	Ground cable · <b>50 mm<sup>2</sup></b> · direct	Spotcar EVO 4000	
	<b>99920216</b>	Ground cable · <b>70 mm<sup>2</sup></b> · direct	Spotcar EVO 5000	
	<b>99920181</b>	Ground cable + fast ground <b>50 mm<sup>2</sup></b> · direct	Spotcar EVO 4000	
	<b>99920182</b>	Ground cable + fast ground <b>50 mm<sup>2</sup></b> · direct · <b>50 mm<sup>2</sup></b>	Spotcar EVO 5000	
	<b>99920122</b>	fast ground	Spotcar EVO 4000 · 5000	
	<b>99920525</b> Scatola ricambi	<b>99920126</b>	Puller hammer without handle	Spotcar EVO 4000 · 5000
		<b>99920048</b>	Mandrel for 3 points washers	
		<b>99920042</b>	carbon electrode <b>10 x 300</b> · lots of 5 pcs	
		<b>99920524</b>	Electrode for squeezing <b>Ø 16 mm</b>	
		<b>99920127</b>	3 points washers lots of 10 pcs	
	<b>99920173</b>	Accessories for pulling wavy wires	-	
	<b>99920175</b>	Puller hammer with handle	-	
	<b>99920126</b>	Puller hammer without handle	-	





## SPOT WELDING ACCESSORIES

## SPOT CAR EVO 4000 · 5000

	99920048	Mandrel for 3 points washers	
	99920041	3 pointed washers · lots of 20 pcs	
	99920127	3 pointed washers · lots of 10 pcs	
	99920042	Carbon electrode · 10 x 300 · lots of 5 pcs	
	99920050	Copper chromium electrode · Ø 16 mm	
	99920524	Electrode for squeezing · Ø 16 mm	
	99920177	Electrode for waved wires · Ø 10 mm	
	99920178	M10 pointed mass · lots of 1 pc	
	99920189	M10 pointed mass · lots of 5 pcs	
	99920138	M8 pointed mass · lots of 1 pc	
	99920188	M8 pointed mass · lots of 5 pcs	
	99920116	Waved copper coated wire · 315 mm · lots of 10 pcs	
	99920117	Waved copper coated wire · 315 mm · lots of 50 pcs	
	99920113	A · hook gripped head · 6 hooks	
	99920114	B · hook gripped head · 8 hooks	
	99920115	C · hook gripped head · 10 hooks	
	99920187	Kit mandrel for spot welding	
	99920186	Mandrel for coal heating/crushing spot welder	
	99920190	Welding spray resistant fabric up to 1000°C · 92 x 200 cm	
	99920090	Electrode holder mandrel with nut	





**SPOT WELDING ACCESSORIES**
**ACCESSOIRES · SPOT CAR ALU 33 · 66**

	<b>99920500</b>	FastGun + ground cable · 3 m · 3 pins	
	<b>99920134</b>	<b>Accessories box</b> Electrode for AL studs · for <b>M4</b> Washers KIT · Kit of 5 pcs · for <b>M4</b> Screw - AlMg3 · 100 pcs · <b>M4 x 16 mm</b> Screw - AlSi12 · 100 pcs · <b>M4 x 16 mm</b>	

**SPARE PARTS · SPOT CAR ALU 33 · 66**

	<b>99920478</b>	Electrode for AL screws · for <b>M3</b>	
	<b>99920219</b>	Electrode for AL screws · for <b>M4</b>	
	<b>99920479</b>	Electrode for AL screws · for <b>M5</b>	
	<b>99920480</b>	Electrode for AL screws · for <b>M6</b>	
	<b>99920159</b>	Washers KIT · Kit of 5 pcs · for <b>M3</b>	
	<b>99920160</b>	Washers KIT · Kit of 5 pcs · for <b>M4</b>	
	<b>99920161</b>	Washers KIT · Kit of 5 pcs · for <b>M5</b>	
	<b>99920162</b>	Washers KIT · Kit of 5 pcs · for <b>M6</b>	
	<b>99920163</b>	Screw - AlMg3 · 100 pcs · <b>M3 x 12 mm</b>	
	<b>99920164</b>	Screw - AlMg3 · 100 pcs · <b>M4 x 16 mm</b>	
	<b>99920165</b>	Screw - AlMg3 · 100 pcs · <b>M5 x 20 mm</b>	
	<b>99920167</b>	Screw - AlSi12 · 100 pcs · <b>M3 x 12 mm</b>	
	<b>99920168</b>	Screw - AlSi12 · 100 pcs · <b>M4 x 16 mm</b>	
	<b>99920169</b>	Screw - AlSi12 · 100 pcs · <b>M5 x 20 mm</b>	

**PULLING SYSTEMS**

	<b>99920141</b>	Pull system for aluminium	
	<b>99920227</b>	ALU pocket pull system	
	<b>99920226</b>	Double pull system	
	<b>99920225</b>	Single pull system	

## DEALER KIT

## DEALER KIT



99900181K Metallic product display

99900293 Carton product display



77920023 **ROLL UP** Helvi • Institutional design  
ITALIAN • 80x200 mm

77920024 **ROLL UP** Helvi • Institutional design  
ENGLISH • 80x200 mm

77920025 **ROLL UP** Helvi • Welding design  
ITALIAN • 80x200 mm

77920026 **ROLL UP** Helvi • Welding design  
ENGLISH • 80x200 mm



77920027 **PVC BANNER** Helvi  
100x200 mm






## MERCHANDISING

## MERCHANDISING



77920013

 Helvi **PENS**

 Available in different colors:   


77920014

 Helvi **ANTI-STRESS**

shaped Fox 185



77920015

 Helvi **T-SHIRTS**

 color **BLACK**


77920016

 Helvi **SHOPPERS**

 color **BLACK**


77920017

 Helvi **CAPS**

 color **BLACK**



# FEATURES LEGEND

	European conformity		Reference regulations		Regulation of energy efficiency
	Multitension (110V - 230V)		Air cooling		Water proof
	No-load voltage reduction		System that allows reduction of electricity consumption		Multitension Input
	Possibility of use with power generators		Unstable line voltage compensation		Display for parameter visualization
	Alternating current welding		Direct current welding		Alternating/direct current welding
	Suitable for heavy duty		Suitable for automotive		25mm <sup>2</sup> connection
	MMA electrode welding		Arc Force function (avoids electrode sticking during welding)		Hot start function (Makes starting the arc easier)
	Anti sticking function		Rutile and Basic electrodes		Cellulosic and Aluminium electrodes
	TIG welding		TIG Lift Arc (contact)		TIG HF start (at distance)
	TIG Pulse		Possibility to set all TIG parameters		Facilitate welding parameters adjustments



## FEATURES LEGEND

	MIG/MAG welding		Spool wire capacity of 5kg max		Synergic regulation
	2 rolls plastic wire feeder		2 rolls metallic wire feeder		4 rolls metallic wire feeder
	MIG welding Gas / no Gas (flux core)				
	Plasma cutting		Pneumatic torch		Compressor included
	Spot welding		Capacitive discharge		ALU studs 3 to 6 mm
	Battery chargers		Suitable for motorcycle		Suitable for cars
	Suitable for nautical purpose		Suitable for tractors		Recharge timer
	Car protection system during start		Starter function		Desulphation
	Recondition		Maintenance		Supply
	Fast/slow charge		Low temperature charge		Night mode
	Tester		Type of supported batteries		

# TRADING TERMS & CONDITIONS

## Art 1 Contract formation.

Any order from the Buyer shall be binding for HELVI SPA, only when accepted in writing by HELVI SPA itself. HELVI SPA shall have the right to refuse any amendment requested by the Buyer. Unless otherwise agreed in writing, HELVI SPA shall not accept any cancellation of orders.

## Art 2 Characteristics of the Products

Catalogues, price lists or other advertising matters are only an indication of the type of products and no prices or other particulars contained herein shall be binding for HELVI SPA. Any information or data relating to technical features and/or specifications of the Products contained in dépliant, price lists, catalogues and similar documents shall be binding only to the extent they are expressly referred to in the contract. All information given in price lists and catalogues or any literature are supplied by HELVI SPA in good faith; however, whilst every effort has been made to ensure that the information is correct, HELVI SPA does not accept any responsibility for errors which may have inadvertently been made. Designs and drawings of machines, wiring diagrams, manuals and graphics and marketing materials are HELVI SPA's property and no one can alter, modify or copy them. At any time, HELVI SPA shall have the right to make any change to the products which appear to be necessary or suitable. The Buyer shall have no right to indemnities or other remedies for such modifications.

## Art 3 Prices.

HELVI SPA shall have the right to increase prices, by prior notice, in accordance to any change of cost of raw materials and labour which may take place between the date of order and the delivery. Unless otherwise agreed, the prices indicated in the quotations and in the contract are EX WORKS Sandrigo (Vicenza-Italy) and include only the packing costs for each single Product. It is agreed that any other cost or charge relating to any other kind of packaging, including customised packaging, shall be for the account of the Buyer.

## Art 4 Payment conditions.

All payments must be made, for the exact amount applied without any deductions and clear of any charges, directly to the head office of HELVI SPA in Sandrigo (Vicenza – Italy), according to the payment conditions agreed upon each time. In addition to the other remedies permitted under the applicable laws, in case of late payment HELVI SPA shall have the right, at its own discretion, to charge delay interests at the current legal rate plus seven per cent, plus cashing, banking and legal expenses. Delay interests shall be due, from due date to the payment without any formal requests. Unless otherwise agreed in writing, any expenses or bank commissions due with respect to the payment shall be for the Buyer's account.

## Art 5 Retention of title.

a) It is agreed that the Products delivered remain HELVI SPA's property until complete payment is received by HELVI SPA. b) The Buyer shall have, according to article 5 a) hereabove, the right to sell the Products, and any new product in which the Products have been converted into other products, in the ordinary course of business on the understanding that the proceeds of any such sale shall belong to HELVI SPA to whom the Buyer shall account such proceeds up to the concurrence of the full price due by the Buyer to HELVI SPA for the supply of the Products. c) HELVI SPA shall have the right at any time to revoke the Buyer's right of sale by written notice to the Buyer, if the Buyer is in default in respect of payment of any sum due to HELVI SPA for longer than 7 (seven) working days (whether in respect of Products or other goods or services supplied by HELVI SPA to the Buyer for any other reason whatsoever). d) On termination of the Buyer's right of sale in accordance with the foregoing conditions, the Buyer must place the Products at the disposal of HELVI SPA who shall have the right to enter upon the Buyer's premises for the purpose of removing the Products. e) The Buyer shall act as a bailee and the Products shall be on its responsibility, according to the articles 1766 and following of Italian Civil Code, until the complete payment is received by HELVI SPA.

## Art 6 Terms of delivery.

Except otherwise agreed, the supply of the goods will be EX WORKS (Incoterms® 2020), Sandrigo (Vicenza, Italy), even if it is agreed that HELVI SPA will take care, wholly or in part, of the shipment. In any case, whatever the delivery term agreed between the parties, the risks will pass to the Buyer, at the latest, on delivery of the goods to the first carrier. HELVI SPA shall not provide any transport insurance for the Products, unless otherwise agreed in writing.

## Art 7 Complaints

Any complaints relating to packing, quantity, number or exterior features of the products, including transport damages (apparent defects), must be notified to HELVI SPA by a written notice within eight days from receipt of the Products; failing such a notification, the Buyer's right to claim the above defects will be forfeited. It is agreed that any complaints or objections do not entitle the Buyer to suspend or to delay payment of the Products as well as payment of any other supply. HELVI SPA shall not accept any return without HELVI SPA's prior written authorization. Any return of Products not authorized by HELVI SPA shall be shipped back to the Buyer at the Buyer's charge.

## Art 8 Delivery times.

Any date quoted in orders confirmations for delivery of the Products is approximate. In the event of delay, no liability, order cancellation nor penalty shall be accepted by HELVI SPA. HELVI SPA shall endeavour to complete the contract and/or deliver the Products within the time agreed (if any) but it shall not be liable for any loss or damage of any kind whatsoever caused directly or indirectly by any delay in the completion of the contract or delivery of the Products. Any delay caused by force majeure or by acts or omissions of the Buyer (e.g. the lack of indications which are necessary for the supply of the Products), shall not be considered as a delay on HELVI SPA's responsibility. If the Buyer fails to make any payment on the time and in the manner specified by HELVI SPA or becomes insolvent or bankrupt or makes composition with its creditors or has a receiver appointed or passes a resolution for winding up, HELVI SPA shall have, at its own discretion, the right to suspend or cancel further deliveries, to request advanced payments or guarantees.

## Art 9 Force majeure.

Either party shall have the right to suspend performance of its contractual obligations when such performance becomes impossible or unduly burdensome because of unforeseeable events beyond its control, such as strikes, boycotts, lock-outs, fires, war (either declared or not), civil war, riots, revolutions, requisitions, embargo, energy black-outs, delay in delivery of components or raw materials.

## Art 10 Warranty.

HELVI SPA undertakes to remedy any defects, lack of quality or non-conformity of the Products for which it is liable, occurring within the warranty terms, provided such defects have been timely notified in accordance with art. 7. HELVI SPA at its sole discretion may choose whether to repair, replace or refund (totally or partially) the products found to be defective. The guarantee will be valid only if the product is accompanied by an invoice or receipt proving the date of sale with the serial number indicated in writing in the sales document. In the event that it cannot be demonstrated with an invoice or receipt, HELVI SPA reserves the right to apply the standard guarantee of 24 months from the date of the HELVI SPA sales document to the dealer.

## WARRANTY TIME PERIODS

36 MONTHS	24 MONTHS	
Transformers Chokes	Rectifiers	Power PCBs Control PCBs
12 MONTHS		
Cooling system Water pump Switches	Contactors Gas valves Mechanical parts	Remote controls Fan motors Wire drive motors Welding masks

## WHAT IS NOT COVERED UNDER THIS WARRANTY:

- consumable parts, for instance contact tips, nozzles, welding cables, ground clamps, electrode holders, cable assemblies, wire spools, drive rolls, etc.;
- parts that fail due to normal wear;
- TIG, MIG and PLASMA torches;
- Input cables;
- Gas regulator;
- On-site intervention costs, damage from non-production;
- Products failed due to transport damages, abnormal working conditions, failure to follow HELVI SPA instructions, negligence, lack of maintenance, abnormal or unsuitable supply of electricity, misuse, tampering, alteration and/or repair of the products without HELVI SPA authorization.

## WARRANTY EXCLUSIONS

The following cases are excluded from the guarantee and immediately invalidate the validity:

- The warranty will expire if the product has exceeded 36 months of storage;
- Breakages due to incorrect use or neglect;
- Transport damage;
- Wrong connection to the electrical network;
- Overvoltage or undervoltage due to the electricity grid
- Overvoltage or undervoltage due to underpowered, un-stabilized, too old or incorrectly used motor-generators;
- Tampering or Repairs performed by not authorized personnel;
- Removal of labels;
- Failure to pay an instalment or product invoice.

## RETURN AUTHORIZATION

The buyer must contact the retailer from whom he purchased the Product or the nearest authorized service center ([www.helvi.com](http://www.helvi.com)), presenting it accompanied by the necessary documentation:

- Legible copy of the invoice or purchase receipt (proving the sales data with the serial number indicated in writing in the sales document).

Failing this documentation the warranty shall be void. In case that the retailer is not available, the buyer can forward the warranty claim directly to:

### HELVI SPA

V.le G. Galilei 123, 36066 Sandrigo (VI), Italy  
[service@helvi.com](mailto:service@helvi.com) Ph: +39 0444 666999 Fax: +39 0444 750070

HELVI SPA shall not accept any return without HELVI SPA's prior written authorization. In case of unauthorized returns, HELVI SPA reserves the right to charge a handling fee of 40,00€. If a returned product is found not to be defective, HELVI SPA reserves the right to charge the labour cost of 50,00€/hour for the fault investigation. The warranty is EX WORKS (Incoterms® 2020), Sandrigo (Vicenza, Italy), therefore HELVI SPA shall not pay any transport costs or expenses (whether from the Buyer's premises to HELVI SPA, or from HELVI SPA premises to the Buyer's) which shall be at the Buyer's charge. At the discretion of HELVI SPA, foreign customers may be exempt from returning defective Products if the cost of transportation is excessive.

## WARRANTY REPAIR

In the event that a product failure occurs within the warranty period, please contact your nearest authorized dealer or service center ([www.helvi.com](http://www.helvi.com)). At its discretion, HELVI SPA can send spare parts free of charge to the nearest service center to carry out the repair, only after checking with the Helvi Service, who can authorize the repair or not.

## Art 11 Online E-Commerce and use of company logos.

HELVI SPA does not authorize its dealers to promote or sell their products on any online sales platform or website, unless agreed between both parties. The use of registered trademarks without the authorization expressed by HELVI SPA commits a criminal offense sanctioned by the Italian and European legal system (or by the country in which the crime was committed) and as such is punishable by the competent judicial police authorities and punished with the penalties provided for this offense.

## Art 12 Applicable laws – Jurisdiction.

These general terms and conditions and any contract made hereunder with HELVI SPA shall be construed and interpreted in accordance with the substantive laws of Italy. The competent law Court of Vicenza, ITALY, shall have exclusive jurisdiction in any action arising of or in connection with these terms and condition or any contract made with HELVI SPA. However as an exception to the principle hereabove, HELVI SPA is in any case entitled to bring its action before the competent court of the place where the Buyer has its registered office. The United Nations Conventions for the International Sale of Goods does not apply to any supply of Products made by HELVI SPA to any Buyer.

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We have done our best to ensure the information in this catalogue is correct. However, we reserve the right to introduce changes without prior notice.

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## Helvi S.p.A.

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