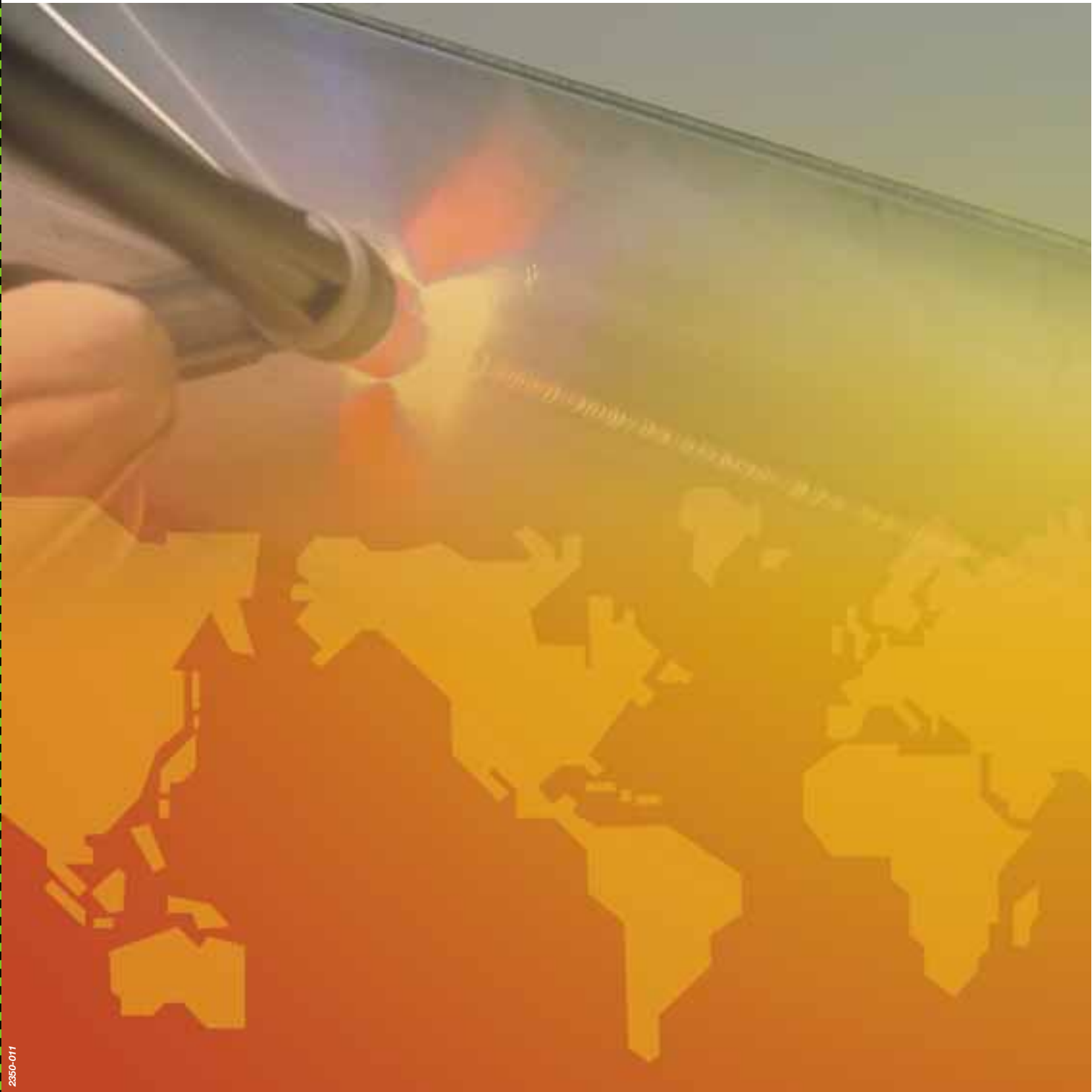


Chapter 2

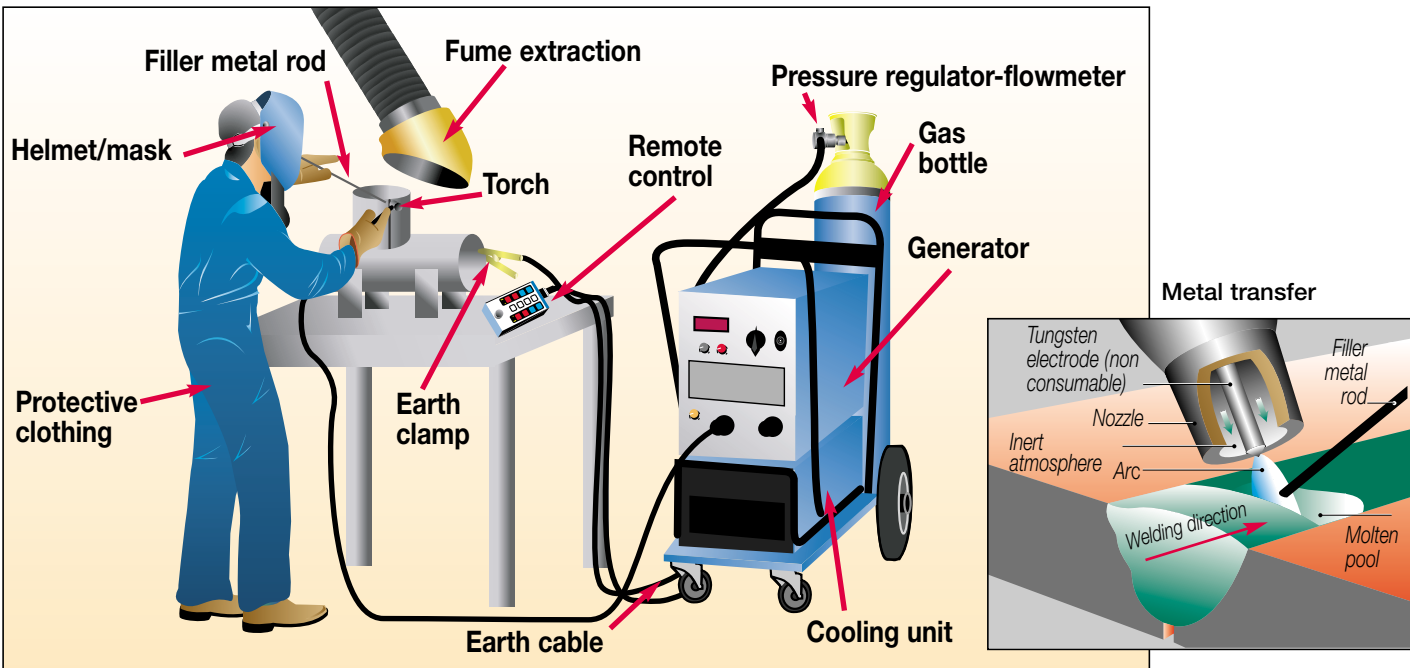
TIG welding



TIG welding

TIG welding overview and selection guide

Scheme of a manual installation for TIG welding



Choice criteria for TIG power sources

Power supply	Nature of current		PAC striking	HF striking	Welding current (Ampere)				Simple cycle	Complete cycle	Pulse mode	Weight (kg)	Name of product
	alternating AC ~	direct DC =			100	200	300	400					
Single-phase	-	✓	-	✓					✓	-	no	10	CITIG 1500 DC
Single-phase	-	✓	✓	✓					-	✓	yes	10	CITIG 1700 DC
Single-phase	-	✓	✓	✓					-	✓	yes	18	CITIG 2200 DC
Three-phase	-	✓	✓	✓					-	✓	yes	16,5	CITIG 2300 DC
Single-phase	-	✓	✓	✓					-	✓	yes	15	CITOTIG 200 DC
Three-phase	-	✓	✓	✓					-	✓	yes	22/32	CITOTIG 300/300 W DC
Three-phase	-	✓	✓	✓					-	✓	yes	33	CITOTIG 400 W DC
Three-phase	-	✓	-	✓					✓	-	no	104	CITOTIG TH 250 DC
Three-phase	-	✓	-	✓					✓	-	no	159	CITOTIG TH 350/350 W DC
Three-phase	-	✓	✓	✓					-	✓	yes	99	CITOTIG 350 W DC
Single-phase	✓	✓	-	✓					✓	-	yes	22	CITIG 1500 AC/DC
Single-phase	✓	✓	✓	✓					-	✓	yes	30	CITOTIG 200 AC/DC
Single-phase	✓	✓	✓	✓					-	✓	yes	50	CITOTIG 200 W AC/DC
Three-phase	✓	✓	✓	✓					-	✓	yes	39	CITOTIG 250 AC/DC
Three-phase	✓	✓	✓	✓					-	✓	yes	65	CITOTIG 250 W AC/DC
Three-phase	✓	✓	✓	✓					-	✓	yes	74	CITOTIG 350 W AC/DC
Three-phase	✓	✓	✓	✓					-	✓	option	149	CITOTIG 500 W AC/DC

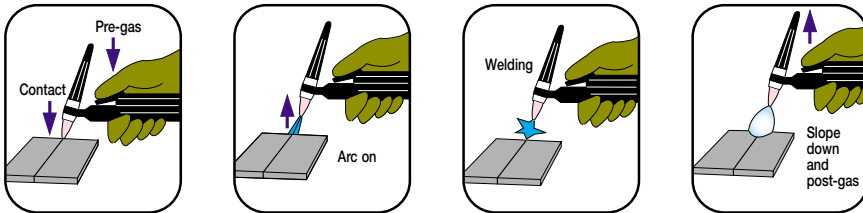


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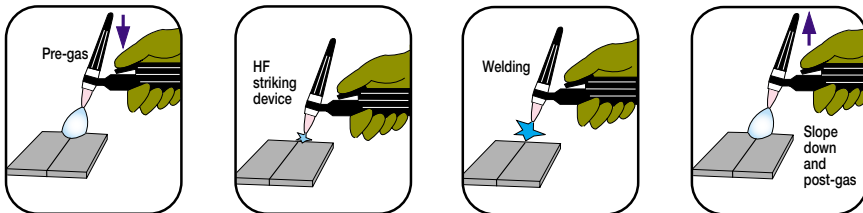
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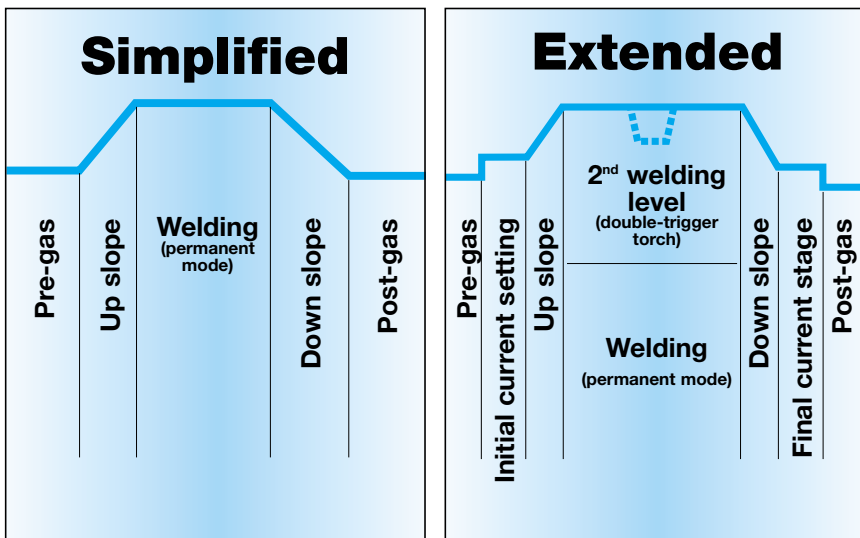
PAC SYSTEM arc striking device



HF arc striking device



TIG welding cycles



TIG welding glossary

European CE standards

They guarantee a quality of construction, chemical and mechanical characteristics and a level of safety. All Oerlikon generators have CE certification. They impose construction according to European directives.

- Directive 89/336 imposes limitation of emissions of electromagnetic interferences.
- The low voltage directives impose manufacturing, safety and performance rules.

EN 60974-1, device capacities are given according to a welding current delivered at a given duty cycle.

Duty cycle

It is defined in the standard. The duty cycle is the duration of continuous use of a device, based on a time of 10 minutes at a temperature of 40°C. A duty cycle of 100 A at 60% means that over a period of 10 minutes, it is possible to weld continuously for 6 minutes, followed by a stop of 4 minutes. A duty cycle of 100 A at 100% means that the source is designed to deliver 100 A continuously.

Pre-gas

Used to purge the torch pipes before welding in order to start welding in an atmosphere of protective gas.

Preheating stage

Allows positioning on the joint and preheating of the metal to be welded.

Up slope

Makes it possible to reach the welding current level progressively.

Down slope

Avoids the crater (shrinkage cavity) at the end of the bead when welding stops.

End setting

Allows slower cooling of the weld pool and selection of a "lighted arc" welding cycle, which is very useful when welding in position.

CITOSTEP

Used to adjust two distinct current levels via a signal from the torch trigger.

Post-gas

Protects the weld pool and tungsten electrode during cooling.

Balance

Allows welding using alternating current (light alloys) to favour cleaning or penetration.

Pulsed system

Avoids collapse of the weld pool during welding of thin thicknesses by time phasing the welding current between a high value (hot time) and a low value (cold time).

Clamping

Saves time during spot welding operations by avoiding having to go through the whole welding cycle.

HF arc striking

System involving a distant striking of the electric arc without contact between the tungsten electrode and the part to be welded.

Arc striking on contact

System involving striking of the electric arc as soon as the torch is raised after contact has been made between the part and the tungsten electrode. This mode is particularly useful when operating in environments that are sensitive to high-frequency interference.

Square waves

In alternating current, the square form of current wave ensures excellent arc stability and avoids arc disruption when the current changes direction.

IP protection class

The first figure indicates the maximum diameter of an object able to penetrate the device and come in contact with a dangerous component. The second figure indicates the level of protection against falling rain. Example: IP 23 - the "2" indicates that an object with a diameter greater than 12.5 mm may not be introduced into the device - the "3" indicates that it is not damaged by rainfall at an angle of 60°.



CITIG DC ranges

Single or three-phase portable inverters for MMA and TIG DC high quality work on non-alloyed or stainless steels.

1

CITIG 1500 DC

5 product advantages:

- HF striking
- simple welding cycle: pre-gas, slope-down and post-gas adjustable on the front panel
- MMA or TIG DC modes
- 2T-4T modes
- over heating thermal protection



2006-421

To order

- **Standard equipment:**
 - 1 CITIG 1500 DC
 - 1 primary cable L = 3.5 m with SCHUKO plug
 - 1 earth cable L = 3 m with earth clamp and DINSE connector
 - 1 equipped gas hose L = 3 m
- **Add-ons:**
 - CITORCH T 20 EB C5B 5 m torch
Cat. no. W 000 265 529
 - CITORCH T 20 EBS 5 m torch
Cat. no. W 000 265 546
 - Accessory kit MMA 25C50
Cat. no. W 000 260 684
- **Options:**
 - Maintenance box for:
 - CITORCH T 20
Cat. no. W 000 306 448

2

CITIG 1700 DC

9 product advantages:

- pulsed TIG current
- complete welding cycle
- digital display of the parameters
- MMA or TIG DC modes
- HF-PAC arc striking
- 2T-4T modes
- choice of two current levels
- over heating thermal protection
- suitable for outdoor use



2006-833

To order

- **Standard equipment:**
 - 1 CITIG 1700 DC
 - 1 primary cable L = 4.4 m
 - 1 equipped gas hose L = 2 m
- **Add-ons:**
 - CITORCH T 20 EB C5B 5 m torch
Cat. no. W 000 265 529
 - CITORCH T 20 EBS 5 m torch
Cat. no. W 000 265 546
 - Accessory kit MMA 25C50
Cat. no. W 000 260 684
- **Options:**
 - Maintenance box for:
 - CITORCH T 20
Cat. no. W 000 306 448
 - Remote control
Cat. no. W 000 242 069
 - Foot pedal
Cat. no. W 000 241 602

Technical specifications	1 CITIG 1500 DC	2 CITIG 1700 DC	3 CITIG 2200 DC	4 CITIG 2300 DC
Power supply	230 V (± 10%) 50-60 Hz single-phase	230 V (± 10%) 50-60 Hz single-phase	230 V (± 10%) 50-60 Hz single-phase	400 V (+ 10% -15%) 50-60 Hz three-phase
Primary consumption at I max.	20 A	22 A	16 A (PFC)	9.6 A
Effective consumption	12 A	13 A	13 A	5 A
Open circuit voltage	85 V	85 V	97 V	80 V
Welding current	5 - 150 A	5 - 160 A	5 - 220 A	5 - 220 A
Protection class	IP 23	IP 23	IP 23	IP 23C
Insulation class	H	H	H	H
Duty cycle 10 min. cycle (at 40 °C)	at 100%	100 A	110 A	110 A
	at 60%	120 A	140 A	145 A
	at 35%	150 A	160 A	220 A (at 25%)
Electrode diameter max.	4.0 mm	4.0 mm	5.0 mm	5.0 mm
Dimensions (L x W x H)	420 x 175 x 300 mm	420 x 180 x 300 mm	460 x 330 x 450 mm	472 x 152 x 385 mm
Net weight	10 kg	10 kg	18 kg	16.5 kg
Standards	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10
Torch types	C5B - S families	C5B - S families	C5B - S families	C5B - S families

3**CITIG 2200 DC****11 product advantages:**

- MMA or TIG DC modes
- complete welding cycle
- pulsed TIG current
- choice of two current levels
- digital display of the parameters
- HF-PAC arc striking
- 2T-4T modes
- max input current < 16 A
- over heating thermal protection
- robust and light
- suitable for outdoor use



2006-842

To order

- **Standard equipment:**

- 1 CITIG 2200 DC
- 1 primary cable L = 3.5 m
- 1 equipped gas hose L = 2 m
- Cat. no. W 000 260 969

- **Add-ons:**

- CITORCH T 30 EB C5B 5 m torch
Cat. no. W 000 265 531
- CITORCH T 30 EBS 5 m torch
Cat. no. W 000 265 523
- Accessory kit MMA 35C50
Cat. no. W 000 011 139

- **Options:**

- Maintenance box for:
 - CITORCH T 30
Cat. no. W 000 306 449
- Remote control
Cat. no. W 000 242 069
- Foot pedal
Cat. no. W 000 241 602

4**CITIG 2300 DC****7 product advantages:**

- complete welding cycle, pre-gas, slope-down and post-gas adjustable
- pulsed TIG current
- MMA or TIG DC modes
- HF-PAC arc striking
- 2 current levels with CITOSTEP function
- 2T-4T, spot mode
- suitable for on-site operations



2006-634

To order

- **Standard equipment:**

- 1 CITIG 2300 DC
- 1 primary cable L = 3 m with SCHUKO plug
- 1 earth cable L = 3 m with earth clamp and DINSE connector
- 1 equipped gas hose L = 3 m
- Cat. no. W 000 265 134

- **Add-ons:**

- CITORCH T 30 EB C5B 5 m torch
Cat. no. W 000 265 531
- CITORCH T 30 EBS 5 m torch
Cat. no. W 000 265 523
- Accessory kit MMA 35C50
Cat. no. W 000 011 139

- **Options:**

- Maintenance box for:
 - CITORCH T 30
Cat. no. W 000 306 449
- Remote control
Cat. no. W 000 263 312
- Foot pedal
Cat. no. W 000 263 314
- Power box 230/400 V
50/60 Hz - 20 kvA
Cat. no. W 000 305 106

2

1794-031

CITOTIG DC range

Single or three-phase portable inverters for MMA and TIG DC high quality work on non-alloyed or stainless steels.

1

CITOTIG 200 DC

12 product advantages:

- complete welding cycle, pre/post-gas, up/down slope current setting
- MMA or TIG DC modes
- pulsed and synergic pulsed TIG current
- 2T-4T and spot mode selection
- HF-PAC arc striking
- digital meter
- electric generator compatibility
- 9 welding program memory
- 2 current levels with the CITOSTEP function
- durable steel cabinet
- suitable for on-site operations
- protection against dust and spatter

To order

• Standard equipment:

- 1 CITOTIG 200 DC
- 1 equipped primary cable L = 3 m with plug
- 1 earth cable L = 3 m with earth clamp and DINSE connector
- 1 equipped gas hose L = 1.5 m
Cat. no. W 000 262 993

• Add-ons:

- CITORCH T 30 EB C5B 5 m torch
Cat. no. W 000 265 531
- Accessory kit MMA 35C50
Cat. no. W 000 011 139

• Options:

- Maintenance box for:
 - CITORCH T 30
Cat. no. W 000 306 449
- Trolley
Cat. no. W 000 263 310
- Remote control
Cat. no. W 000 263 311
- Foot pedal
Cat. no. W 000 263 313



2006-656

2 3

CITOTIG 300 / 300 W DC

15 product advantages:

- thermal safety indicator
- supply voltage defect indicator
- complete welding cycle, pre/post-gas up/down slope current with setting
- MMA or TIG DC modes
- pulsed and synergic pulsed TIG current
- 2T-4T and spot mode selection
- HF-PAC arc striking
- digital display
- electric generator compatibility
- built-in cooling unit (300 W)
- 9 welding program memory
- 2 current levels with the CITOSTEP function
- durable steel cabinet
- suitable for on-site operations
- protection against dust and spatter

To order

• Standard equipment:

- CITOTIG 300 DC
Cat. no. W 000 262 994
- CITOTIG 300 W DC
Cat. no. W 000 265 600 with COOLERTIG (with equipped primary cable L = 3 m + earth cable L = 3 m + earth clamp and DINSE connector + 1 equipped gas hose L = 1.5 m)

• Add-ons:

- CITORCH T 40 EB C5B 5 m torch
Cat. no. W 000 265 533
- CITORCH T 10 W EB C5B 5 m torch
Cat. no. W 000 265 537 (for 300 W)
- Accessory kit MMA 50C50:
Cat. no. W 000 260 681

• Options:

- Maintenance box for:
 - CITORCH T 40
Cat. no. W 000 306 450
 - CITORCH T 10
Cat. no. W 000 306 447 (for 300 W)
- Trolley
Cat. no. W 000 263 310
- Remote control
Cat. no. W 000 263 311
- Foot pedal
Cat. no. W 000 263 313
- COOLERTIG
Cat. no. W 000 263 453
- Power box 230/400 V 50/60 Hz - 20 kVA
Cat. no. W 000 305 106
- FREEZCOOL 9.6 L
Cat. no. W 000 010 167



2006-646

2006-671



3551-046

4

CITOTIG 400 W DC**11 product advantages:**

- built-in cooling unit
- digital display and supply voltage defect indicator
- complete welding cycle, pre/post-gas up/down slope current with setting
- MMA or TIG DC 2T-4T and spot mode selection
- pulsed and synergic pulsed TIG current
- HF-PAC arc striking
- electric generator compatible
- 9 welding program memory
- 2 current levels with the CITOSTEP function
- durable steel cabinet
- protection against dust and spatter

To order**• Standard equipment:**

- CITOTIG 400 W DC with COOLERTIG
Cat. no. W 000 265 520
(with equipped primary cable
L = 3 m + earth
cable L = 3 m + earth
clamp and DINSE connector
+ equipped gas hose L = 1.5 m)

• Add-ons:

- CITORCH T 30 W EB C5B 5 m torch
Cat. no. W 000 265 539
- CITORCH T 10 W EB C5B 5 m torch
Cat. no. W 000 265 537
- Accessory kit MMA 50C50+
Cat. no. W 000 260 682

• Options:

- Maintenance box for:
CITORCH T 10
Cat. no. W 000 306 447

- CITORCH T 30
Cat. no. W 000 306 449
- Trolley
Cat. no. W 000 263 310
- Remote control
Cat. no. W 000 263 311
- Foot pedal
Cat. no. W 000 263 313
- Power box 230/400 V
50-60 Hz - 20 KVA
Cat. no. W 000 305 106
- FREEZCOOL 9.6 L
Cat. no. W 000 010 167



2006-669



3551-009

2

Technical specifications	1 CITOTIG 200 DC	2 CITOTIG 300 DC	3 CITOTIG 300 W DC	4 CITOTIG 400 W DC
Power supply	230 V ($\pm 10\%$) 50-60 Hz single-phase	400 V (+ 20% -15%) 50-60 Hz three-phase	400 V (+ 20% -15%) 50-60 Hz three-phase	400 V (+ 20% -15%) 50-60 Hz three-phase
Primary consumption at I max.	28 A	12.1 A	12.1 A	19.9 A
Effective consumption	15 A	6.6 A	6.6 A	10.9 A
Open circuit voltage	80 V (40 V)	80 V	80 V	80 V
Welding current	5 - 200 A	5 - 300 A	5 - 300 A	5 - 400 A
Protection class	IP 23C	IP 23C	IP 23C	IP 23C
Insulation class	H	H	H	H
Duty cycle 10 min. cycle (at 40 °C)	at 100%	130 A	200 A	220 A
	at 60%	150 A	230 A	285 A
	at 30%	200 A	300 A	400 A
Electrode diameter max.	4.0 mm	5.0 mm	5.0 mm	6.0 mm
Dimensions (L x W x H)	410 x 180 x 390 mm	500 x 180 x 390 mm	499 x 180 x 650 mm	500 x 180 x 650 mm
Net weight	15 kg	22 kg	32 kg	33 kg
Standards	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10
Torch types	C5B family	C5B family	C5B family	C5B family

CITOTIG TH power sources

Your welding partner in workshops or on-site. Powerful, rugged and easy to use power sources. HF striking and excellent stability. Good welding performance in MMA mode.

1

CITOTIG TH 250 DC

11 product advantages:

- user-friendly front panel
- simple welding cycle
- MMA or TIG DC modes
- 2T-4T mode selection
- HF arc striking
- thermal protection
- functional cabinet and recessed front panel
- bottle holder optional
- for welding with all types of electrodes
- digital display (U/I)
- slinging rings



2006-498

To order

• Standard equipment:

- 1 CITOTIG TH 250 DC
- 1 equipped primary cable L = 5 m
- 1 ground cable L = 5 m equipped with clamp
- 1 gas hose L = 3 m
- 1 quick gas coupling

Cat. no. W 000 263 324

• Add-ons:

- CITORCH T 40 EB C5B 5 m torch
Cat. no. W 000 265 533
- CITORCH T 40 EB S 8 m torch
Cat. no. W 000 265 521
- Accessory kit MMA 35C50
Cat. no. W 000 011 139

• Options:

- Maintenance box for:
 - CITORCH T 40
Cat. no. W 000 306 450
- Remote control:
Cat. no. W 000 305 059
- Foot pedal: Cat. no. W 000 305 060
- Cylinder support:
Cat. no. W 000 305 063

2

CITOTIG TH 350 / 350 W DC

11 product advantages:

- user-friendly front panel
- MMA or TIG DC modes
- 2T-4T mode selection
- HF arc striking
- thermal protection
- functional cabinet and recessed front panel
- water cooled version
- coolant flow fault protection (TH 350 W DC)
- for welding with all types of electrodes
- digital display (U/I)
- slinging rings



2006-517

To order

• Standard equipment:

- 1 CITOTIG TH 350 DC
- 1 equipped primary cable L = 5 m
- 1 ground cable L = 5 m equipped with clamp
- 1 gas hose L = 3 m
- 1 quick gas coupling
- 1 built-in cooling unit for the water cooling version

Cat. no. W 000 263 325 (air version)

Cat. no. W 000 263 325 +

W 000 305 027

(for 350 W water version)

• Add-ons:

- CITORCH T 40 EB S 8 m torch
Cat. no. W 000 265 521
- CITORCH T 40 EB C5B 5 m torch
Cat. no. W 000 265 533
- CITORCH T 10 W EB C5B 5 m torch
Cat. no. W 000 265 537
- CITORCH T 10 W EB S 8 m torch
Cat. no. W 000 265 518
- Accessory kit MMA 50C50
Cat. no. W 000 260 681

• Options:

- Maintenance box for:
 - CITORCH T 40
Cat. no. W 000 306 450
 - CITORCH T 10 W
Cat. no. W 000 306 447
- Remote control
Cat. no. W 000 305 059
- Foot pedal
Cat. no. W 000 305 060
- FREEZCOOL 9.6 L
Cat. no. W 000 010 167



2006-522

CITOTIG 350 W DC

Powerful, compact welding installation with inverter technology. Multi-purpose power source, recommended for workshop use for welding non-alloyed and stainless steel.

3

CITOTIG 350 W DC

13 product advantages:

- user friendly front panel
- multi-purpose installation:
TIG DC / pulsed TIG / coated electrodes
- complete TIG welding cycle
- 100 program memory
- break down of each program into 16 sectors
- TIG with HF or PAC system hot start
- digital display
- built-in cooling unit
- numerical control of the process
- chaining with the second trigger
- printer connection output
- fault display
- control by automatic interface



To order

• Standard equipment:

- 1 CITOTIG 350 W DC
- 1 primary cable L = 5 m
- 1 ground cable L = 5 m equipped with clamp,
- 1 tube 2 m equipped with gas,
- 1 quick action coupling
- 1 cooling unit
- 1 LIQUISAF can
- Cat. no. W 000 263 326

• Add-ons:

- CITORCH T 30 W EB C5B 8 m torch
Cat. no. W 000 265 540
- CITORCH T 30 W EB C5B 5 m torch
Cat. no. W 000 265 539
- CITORCH T 10 W EB C5B 5 m torch
Cat. no. W 000 265 537
- CITORCH T 10 W EB C5B 8 m torch
Cat. no. W 000 265 538

- Accessory kit MMA 50C50
Cat. no. W 000 260 681

• Options:

- Remote control
Cat. no. W 000 305 112
- Pulsed remote control
Cat. no. W 000 305 064
- Foot pedal
Cat. no. W 000 305 065
- Auto interface box:
Cat. no. W 000 305 066
- Maintenance box for:
 - CITORCH T 30
Cat. no. W 000 306 449
 - CITORCH T 10 W
Cat. no. W 000 306 447
- FREEZCOOL 9,6 L
Cat. no. W 000 010 167
- Power box 230/400 V
3 ph - 50/60 Hz - 20 KVA
Cat. no. W 000 305 106



2

Technical specifications	1 CITOTIG TH 250 DC	2 CITOTIG TH 350 / 350 W DC	3 CITOTIG 350 W DC
Power supply three-phase	230/400 V ± 10% - 50-60 Hz	230/400 V ± 10% - 50-60 Hz	400 V ± 10% - 50-60 Hz
Primary consumption at I max.	35 A (230 V) 20 A (400 V)	61 A (230 V) 35 A (400 V)	21.7 A
Effective consumption	20.7 A (230 V) - 11.8 A (400 V)	33.4 A (230 V) - 20.7 A (400 V)	10.9 A
Open circuit voltage	97 V	103 V	98.8 V
Welding current	7 - 250 A	5 - 350 A	4 - 350 A
Protection class	IP 23S	IP 23S	IP 23S
Insulation class	H	H	H
Duty cycle at 100%	140 A	200 A	220 A
10 min. cycle at 60%	180 A	260 A	260 A
(at 40 °C) at 35%	250 A	350 A (at 30%)	350 A (at 20 %)
Electrode diameter max.	5.0 mm	6.3 mm	6.3 mm
Dimensions (L x W x H)	650 x 460 x 720 mm	990 x 660 x 990 mm	1090 x 610 x 97 mm
Net weight	104 kg	159 kg	99 kg
Standards	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10
Torch types	C5B - S families	C5B - S families	C5B family

AC/DC inverters range

Technical specifications	1 CITIG 1500 AC/DC	2 CITOTIG 200/200 W AC/DC
Power supply single-phase	230 V ± 10% - 50-60 Hz	230 V ± 10% - 50-60 Hz
Primary consumption at 1 max.	23 A	29.5 A
Effective consumption	13 A	16.2 A
Open circuit voltage	82 V	70 V DC
Welding current	5 - 150 A	3 - 200 A (DC) - 10 - 200 A (AC)
Protection class	IP 23	IP 23C
Insulation class	H	H
Duty cycle 10 min. cycle (at 40 °C)	at 100% 80 A at 60% 100 A at 30% 150 A	150 A - 200 A
Electrode diameter max.	2.4 mm	4.0 mm
Dimensions (L x W x H)	430 x 220 x 250 mm	540 x 260 x 510 mm
Net weight	22 kg	30 kg (50 kg water cooled)
Standards	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10
Torch types	C5B - S families	C5B family

1

CITIG 1500 AC/DC

8 product advantages:

- user-friendly front panel
- AC/DC welding currents
- MMA or 2T-4T TIG and spot mode selection
- pulsed TIG DC
- AC with variable frequencies and adjustment of the balance cleaning time/penetration
- robust
- simple welding cycle
- HF arc striking



2006-400

To order

- **Standard equipment:**
 - 1 CITIG 1500 AC/DC
 - 1 equipped primary cable L = 3 m long with SCHUKO plug
 - 1 earth cable L = 3 m equipped with earth clamp and DINSE connector,
 - 1 equipped gas hose L = 2 m long
- Cat. no. W 000 260 970
- **Add-ons:**
 - CITORCH T 20 EB S 5 m torch
 - Cat. no. W 000 265 546
 - CITORCH T 20 EB C5B 5 m torch
 - Cat. no. W 000 265 529
 - Accessory kit MMA 25C50
 - Cat. no. W 000 260 684
- **Options:**
 - Maintenance box for:
 - CITORCH T 20
 - Cat. No. W 000 306 448

2

CITOTIG 200/200 W AC/DC

13 product advantages:

- AC/DC welding currents
- complete welding cycle: pre/post gas - up/down slope current with setting
- MMA or 2T-4T TIG modes and spot mode selection
- pulsed and synergic pulsed TIG current
- HF-PAC arc striking
- digital display
- 9 program memory
- electric generator compatible
- thermo-switched ventilation
- suitable for maintenance and on-site work
- TIG AC with Cerium (pointed) or pure (ball) tungsten electrodes
- CITOSTEP function (2 welding current levels)
- built-in cooling unit + trolley + FREEZCOOL 5 L for 200 W AC/DC version



2006-686

To order

- **Standard equipment:**
 - 1 CITOTIG 200 AC/DC
 - Cat. no. W 000 262 996 or
 - 1 CITOTIG 200 W AC/DC
 - cooling unit + trolley
 - Cat. no. W 000 270 071
 - 1 equipped primary cable L = 3 m with plug
 - 1 earth cable L = 3 m with clamp and DINSE connector
 - 1 equipped gas hose L = 1.5 m
- **Add-ons:**
 - CITORCH T 30 EB C5B 5 m torch
 - Cat. no. W 000 265 531
 - CITORCH T 10 W EB C5B 5 m torch
 - Cat. no. W 000 265 537
 - Accessory kit MMA 35C50
 - Cat. no. W 000 011 139
- **Options:**
 - Maintenance box for:
 - CITORCH T 30
 - Cat. no. W 000 306 449
 - Maintenance box for CITORCH T 10 W
 - Cat. no. W 000 306 447
 - Trolley for air cooler version
 - Cat. no. W 000 263 308
 - Remote control
 - Cat. no. W 000 263 312
 - Foot pedal
 - Cat. no. W 000 263 314
 - FREEZCOOL 9,6 L
 - Cat. no. W 000 010 167
 - Water safety board
 - Cat. no. W 000 265 148



2563-007

3 4

CITOTIG 250 / 250 W AC/DC

13 product advantages:

- user-friendly front panel
- using AC: adjustment of the balance cleaning time/penetration
- complete welding cycle: pre/post gas - up/down slope current with setting
- MMA or 2T-4T TIG modes and spot mode selection
- pulsed and synergic pulsed TIG current
- HF, PAC arc striking
- supply voltage fault indicator
- digital display and 9 program memory
- electric generator compatible
- built-in cooling unit (250 W)
- CITOSTEP function (2 welding current levels)
- TIG AC with Cerium (pointed) or pure (ball) tungsten electrodes
- thermo-switched ventilation

To order

• **Standard equipment:**

- CITOTIG 250 AC/DC
Cat. no. W 000 265 363
- CITOTIG 250 W AC/DC + cooling unit
Cat. no. W 000 262 999
(with equipped primary cable L = 3 m + earth cable L = 3 m with clamp and DINSE connector + equipped gas hose 1,5 m)

• **Add-ons:**

- CITORCH T 40 EB C5B 5 m torch
Cat. no. W 000 265 533
- CITORCH T 10 W EB C5B 5 m torch
Cat. no. W 000 265 537 (250 W)
- Accessory kit MMA 50C50
Cat. no. W 000 260 681

• **Options:**

- Maintenance box for:
 - CITORCH T 40
Cat. no. W 000 306 450
 - CITORCH T 10 W
Cat. no. W 000 306 447
- Trolley
Cat. no. W 000 263 309
- Remote control
Cat. no. W 000 263 312
- Foot pedal
Cat. no. W 000 263 314
- FREEZCOOL 9.6 L
Cat. no. W 000 010 167



2006-727

2006-696



1015-024



Technical specifications	3 CITOTIG 250 AC/DC	4 CITOTIG 250 W AC/DC
Power supply three-phase	230/400/460 V (± 10%) - 50-60 Hz	230/400/460 V (± 10%) - 50-60 Hz
Primary consumption at I max.	18.8 A (230 V) 10.8 A (400 V) 9.4 A (460 V)	18.8 A (230 V) 10.8 A (400 V) 9.4 A (460 V)
Effective consumption (400 V)	9.1 A	9.1 A
Open circuit voltage	70 V (DC)	70 V (DC)
Welding current	3 to 250 A (DC) 10 to 250 A (AC)	3 to 250 A (DC) 10 to 250 A (AC)
Protection class	IP 23C	IP 23C
Insulation class	H	H
Duty cycle 10 min. cycle (at 40 °C)	at 100% 220 A at 70% 250 A	220 A 250 A
Electrode diameter max.	5.0 mm	5.0 mm
Dimensions (L x W x H)	690 x 260 x 550 mm	690 x 260 x 830 mm
Net weight	39 kg	65 kg
Standards	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10
Torch types	C5B family	C5B family

AC/DC inverters range

Technical specifications	1 CITOTIG 350 W AC/DC	2 CITOTIG 500 W AC/DC
Power supply three-phase	400 V (± 10%) - 50-60 Hz	230/400 V (± 10%) - 50-60 Hz
Primary consumption at I max.	16.9 A	48 A (230 V) 36 A (400 V)
Effective consumption (400 V)	13.1 A	21.3 A
Open circuit voltage	70 V (DC)	100 V
Welding current	3 to 350 A (DC) 10 to 350 A (AC)	4 to 500 A (DC) 4 to 500 A (AC)
Protection class	IP 23C	IP 23
Insulation class	H	H
Duty cycle 10 min. cycle (at 40 °C)	at 100% 280 A at 60% 350 A at 35% -	400 A 450 A 500 A
Electrode diameter max.	5.0 mm	6.3 mm
Dimensions (L x W x H)	690 x 260 x 870 mm	960 x 590 x 1170 mm
Net weight	74 kg	149 kg
Standards	EN 60974-1; EN 60974-10	EN 60974-1; EN 60974-10
Torch types	C5B family	C5B family

1

CITOTIG 350 W AC/DC

13 product advantages:

- built-in cooling unit
- user-friendly front panel
- using AC: adjustment of the balance cleaning time/penetration
- complete welding cycle: pre/post gas - up/down slope current with setting
- MMA or 2T-4T TIG modes and spot mode selection
- pulsed and synergic pulsed TIG current
- HF, PAC arc striking
- supply voltage fault indicator
- digital display and 9 program memory
- electric generator compatible
- CITOSTEP function (2 welding current levels)
- TIG AC with Cerium (pointed) or pure (ball) tungsten electrodes
- thermo-switched ventilation

To order

- **Standard equipment:**
 - 1 CITOTIG 350 W AC/DC:
 - 1 equipped primary cable L = 3 m
 - 1 earth cable L = 3 m with clamp and DINSE connector
 - 1 equipped gas hose 1,5 m
 - 1 coolertig
- Cat. no. W 000 263 000
- **Add-ons:**
 - CITORCH T 35 W EB C5B 5 m torch
 - Cat. no. W 000 266 167
 - CITORCH T 10 W EB C5B 5 m torch
 - Cat. no. W 000 265 537
 - Accessory kit MMA 50C50+
 - Cat. no. W 000 260 682
- **Options:**
 - Maintenance box for:
 - CITORCH T 35 W
 - Cat. no. W 000 306 450
 - CITORCH T 10 W
 - Cat. no. W 000 306 447
 - Trolley
 - Cat. no. W 000 263 309
 - Remote control
 - Cat. no. W 000 263 312
 - Foot pedal
 - Cat. no. W 000 263 314
 - Power box 230/400 V - 3 ph 50/60 Hz - 20 KVA
 - Cat. no. W 000 305 106
 - FREEZCOOL 9,6 L
 - Cat. no. W 000 010 167



2006-707

2006-705

2

CITOTIG 500 W AC/DC

11 product advantages:

- user-friendly front panel
- complete welding cycle: 2T-4T, up/down slope, pre/post gas
- multi-process unit: AC/DC TIG, spot and pulsed TIG with a remote controller DC+, DC- or AC in MMA mode
- AC/DC TIG with a single cerium electrode with sharpened point
- AC noise reduction with a range of different wave forms
- numerical control of the process with DSP (Digital Signal Processor) function
- 15 program memory
- compact installation with integrated cooling unit
- CITOSTEP function (2 welding current levels)
- TIG AC with Cerium (pointed) or pure (ball) tungsten electrodes
- thermo-switched ventilation

To order

- **Standard equipment:**
 - 1 CITOTIG 500 W AC/DC
 - 1 equipped primary cable L = 5 m
 - 1 earth cable equipped with a screw clamp 4 m long
 - 1 equipped gas hose L = 3 m long
 - 1 built-in cooling unit
 - 1 can of 5 litres cooling liquid
- Cat. no. W 000 263 717
- **Add-ons:**
 - CITORCH T 35 W EB C5B 5 m torch
 - Cat. no. W 000 266 167
 - CITORCH T 40 W EB C5B 5 m torch
 - Cat. no. W 000 265 541
 - Accessory kit MMA 50C50+
 - Cat. no. W 000 260 682
- **Options:**
 - Maintenance box for:
 - CITORCH T 35 W
 - Cat. no. W 000 306 450
 - CITORCH T 40 W
 - Cat. no. W 000 306 451
 - Remote control: current - frequency - balance
 - Cat. no. W 000 305 052
 - Remote control: pulsed current - basic current - frequency cycle
 - Cat. no. W 000 305 053
 - Remote control pedal
 - Cat. no. W 000 305 054
 - FREEZCOOL 9,6 L
 - Cat. no. W 000 010 167



2006-510

MICROPLASMA and TIG process

Manual and automatic welding applications

For the manual or automatic assembly of thin section precious metals, 0.05 to 1.0 mm. (stainless steels, Inconel, titanium, silver and gold alloys).

Electric component industries, electronics, small containers, metallic filters and tool repair. Medical sector, watchmakers, goldsmiths.

3

PLASMAFIX 51:



2007-469

Product features:

- User friendly front panel.
- Multilingual display.
- Totally programmable welding cycles.
- 100 program memory.
- Use-friendly configuration.
- Printing of programs.
- Also for TIG welding.
- RS 232 equipped for coupling a P.C. or printer
- Liquid cooling
- Tungsten electrodes: Ø 1.0 or 1.6 mm, 75 or 150 mm long,
- 4 m harness.

4

REFRIJET 51:



- Cooling unit. Cat. no. W 000 141 376.

3638-038

3 PLASMAFIX 51

Primary power supply:

• power supply (V)	230-400-440 V - 50-60 Hz. Three-phase
• cos φ	0.91
• max. primary power (phased)	6 A (under 400 V)

Secondary:

• PLASMA smoothed and pulsed	mini 80 m A - maxi 50 A at 100%
• TIG smooth and pulsed	mini 0.8 A - maxi 50 A at 60%
• open circuit voltage	106 V
• pulse frequency	1 Hz to 10 kHz

Other characteristics:

• front programming	keys and code
• display	LCD
• cooling	cooling unit outside power source
• HF source	integrated
• main and annular gas circuit	integrated
• back shielding gas circuit	option
• protection class	IP 23
• weight	95 kg
• dimensions (L x W x H)	650 x 360 x 750 mm

4 REFRIJET 51 cooling unit.

Cooling by liquid in a closed circuit of the SP 45 torch and the power source

PLASMAFIX 51:

• power supply	230 V / 50-60 Hz
• capacity	6 l
• power consumption	2 200 W at 20 °C
• weight	36 kg
• dimensions (L x W x H)	720 x 360 x 340 mm
• FREEZCOOL 9.6 L	Cat. no. W 000 010 167

To order

- PLASMAFIX 51 (power source only) Cat. no. W 000 141 373
- Package for manual application (ready to use) Cat. no. W 000 141 374
- Package for automatic application (ready to use) Cat. no. W 000 141 377

Options

- **Trolley** Cat. no. W 000 141 375, for the following equipment:
 - PLASMAFIX 51,
 - REFRIJET 51,
 - 2 gas cylinders.
- **Double footpedal remote control** (replaces the torch trigger) Cat. no. W 000 141 369
- **Trigger and current adjustment pedal** Cat. no. W 000 174 102.
- **Back weld gas protection device** Cat. no. W 000 141 419 (add a pressure regulator).
- **P.C. software for Windows 3.1, 95 and 98** for PLASMAFIX 51 Cat. no. W 000 141 379
- **+ TIG adaptor** Cat. no. W 000 141 342

Installation on trolley



2007-472

2

MICROPLASMA and TIG process

Torches and wear parts

		To order
Torch SP 45 Automatic		W 000 174 278
Torch SP 45 Manual		W 000 174 268
Thoriated tungsten electrode (2%)	Ø 1.0 mm	W 000 141 298
	Ø 1.6 mm	W 000 142 436
Constricting nozzles	Ø 0.6 mm	W 000 141 333
	Ø 0.8 mm	W 000 141 318
	Ø 1.0 mm	W 000 141 319
	Ø 1.2 mm	W 000 141 320
	Ø 1.5 mm	W 000 141 321
	Ø 1.8 mm	W 000 141 322
Alumina nozzles	Ø 7.0 mm	W 000 141 327
	Ø 9.0 mm	W 000 141 328
	Ø 11 mm	W 000 141 329

SP45 torch maintenance kit



Cat. no. W 000 141 296, contains:

- 2 constricting nozzles Ø 0.8 mm,
- 2 constricting nozzles Ø 1.0 mm,
- 2 constricting nozzles Ø 1.2 mm,
- 2 constricting nozzles Ø 1.5 mm,
- 2 constricting nozzles Ø 1.8 mm,
- 2 electrode holders Ø 1.0 mm,
- 2 electrode holders Ø 1.6 mm,
- 1 alumina nozzle Ø 7 mm,
- 1 alumina nozzle Ø 9 mm,
- 1 alumina nozzle Ø 11 mm,
- 2 electrode centring cases Ø 1.0 mm,
- 2 electrode centring cases Ø 1.6 mm,
- 2 electrode centres Ø 1.0 mm,
- 2 electrode centres Ø 1.6 mm,
- 2 nozzle joints,
- 2 cap joints,
- 1 electrode positioning template,
- 5 electrodes Ø 1.0 mm,
- 5 electrodes Ø 1.6 mm.

Welding lathe



Power supply	230 V - 50 Hz*
Rotation speed	0.1 - 11 rpm
Concentricity of tail stock	± 0.02 mm
Tail stock force	1 950 Ncm
Central axis	166 mm
Maximum distance between points	500 mm
Maximum admissible diameter	320 mm
Drilling of plug	Ø 48 mm
• with axis 3 bits	Ø 20/32/42 mm
• with fastening holders	Ø 16 mm
Weight	150 kg

* For version 60 Hz and for other dimensions contact ALW.



CITORCH T torches

An extensive and a full range for worksite or workshop applications. It is possible to choose the product according to the application and user requirements. The CITORCH torches are delivered ready for use. The choice is based on the type of handle, a round handle or an ergonomic handle and on the type of connection.

CITORCH T standard torches.


Flexible and easy to use torch handles. Easy maintenance. Woven sheath. Flexible harness. High mechanical strength.



Air-cooled torches

CITORCH T 5
Duty cycle 35%: 125 A
Fitted as standard:

• back cap	medium
• nozzle	Ø 10 mm
• electrode	Ø 1.6 mm




Torch CITORCH T 5 with handle RL

2158-005

CITORCH T 10 and CITORCH 10 F + 10 V
Duty cycle 35%: 125 A
Fitted as standard:

• back cap	medium
• nozzle	Ø 10 mm
• electrode	Ø 1.6 mm




Torch CITORCH T 10 with handle RL

0254-012

CITORCH T 20
Duty cycle 35%: 150 A
Fitted as standard:

• back cap	long
• nozzle	Ø 10 mm
• electrode	Ø 2.0 mm

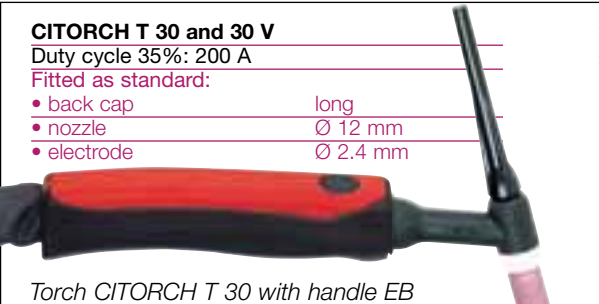


Torch CITORCH 20 with handle RL

0254-015

CITORCH T 30 and 30 V
Duty cycle 35%: 200 A
Fitted as standard:

• back cap	long
• nozzle	Ø 12 mm
• electrode	Ø 2.4 mm

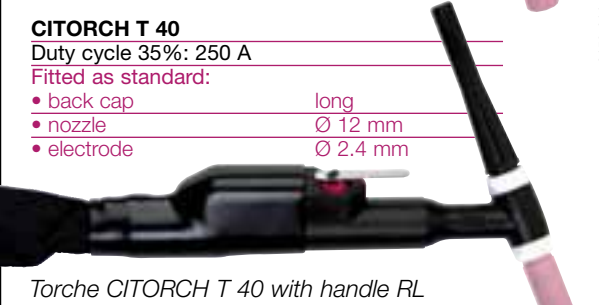


Torch CITORCH T 30 with handle EB

0254-018

CITORCH T 40
Duty cycle 35%: 250 A
Fitted as standard:

• back cap	long
• nozzle	Ø 12 mm
• electrode	Ø 2.4 mm




Torche CITORCH T 40 with handle RL

2158-014

Water-cooled torches

CITORCH T 5 W
Duty cycle 100%: 160 A
Fitted as standard:

• back cap	long
• nozzle	Ø 12 mm
• electrode	Ø 3.2 mm



Torch CITORCH T 5 W with handle RL

2158-005

CITORCH T 10 W - T 10 W F
100%: 250 A
Fitted as standard:

• back cap	long
• nozzle	Ø 12 mm
• electrode	Ø 3.2 mm




Torch CITORCH T 10 W with handle EB

0254-007

CITORCH T 30 W
Duty cycle 100%: 350 A
Fitted as standard:

• back cap	long
• nozzle	Ø 15 mm
• electrode	Ø 4.0 mm

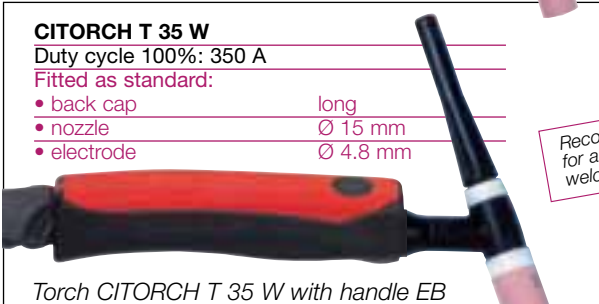


Torch CITORCH T 30 W with handle EB

0254-017

CITORCH T 35 W
Duty cycle 100%: 350 A
Fitted as standard:

• back cap	long
• nozzle	Ø 15 mm
• electrode	Ø 4.8 mm



Torch CITORCH T 35 W with handle EB

2000-365

CITORCH T 40 W
Duty cycle 100%: 450 A
Fitted as standard:

• back cap	long
• nozzle	Ø 14 mm
• electrode	Ø 4.8 mm



Torch CITORCH T 40 W with handle EB

0254-011

Recommended for aluminium welding

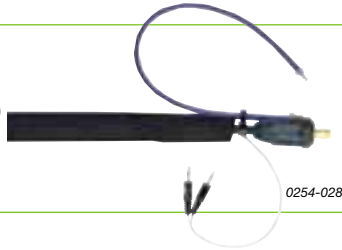


Connection

Choice of connections

S

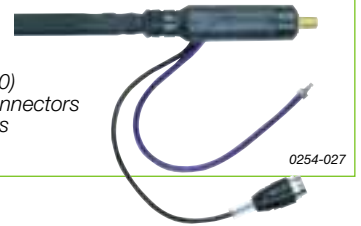
- Power: 1/4 turn
- Gas: threaded (M12x100) or quick-fit (Ø 4 mm) connectors
- Trigger: 2 banana plugs



0254-028

C5B

- Power: 1/4 turn
- Gas: threaded (M12x100) or quick-fit (Ø 4 mm) connectors
- Trigger: 5 pin connectors



0254-027

V

- Torch with valve for arc welding sets
- Power: 1/4 turn 25mm²/ Ø 9 mm for CITORCH T 10 and 50 mm²/ Ø 13 mm for CITORCH T 30
- Gas: gas hose 6.3x11
- Trigger: no power control



0254-025

CC5B

- Power: 1/4 turn
- Gas: hollow central connectors
- Trigger: 5 pin connectors



0254-030

Choice of torch handles

R

Round handle for torch with valve (V)



0254-004

RL

Round handle with lever



0254-012

EB

Ergonomic handle with single button.



0254-010

EBB

Ergonomic handle with double button*.



0254-008

* The double button handle is used on inverter sets. Stepping the weld current down at the end of the welding cycle closes the crater cleanly.



0608-057

Torch		RL S	R V	EB S	EB C5B	EBB C5B	EBB CC5B
CITORCH T 5	5 m	-	-	W 000 265 543	W 000 265 525	-	-
CITORCH T 10	5 m	W 000 262 053	-	W 000 265 544	W 000 265 527	-	W 000 306 064
	8 m	W 000 262 054	-	W 000 265 545	W 000 265 528	-	W 000 306 065
CITORCH T 10 F	5 m	-	-	-	W 000 265 526	-	-
CITORCH T 20	5 m	W 000 262 055	-	W 000 265 546	W 000 265 529	-	W 000 306 066
	8 m	W 000 262 056	-	W 000 265 524	W 000 265 530	-	W 000 306 067
CITORCH T 30	5 m	-	-	W 000 265 523	W 000 265 531	W 000 266 163	W 000 306 068
	8 m	-	-	W 000 265 522	W 000 265 532	W 000 266 164	W 000 306 069
CITORCH T 40	5 m	-	-	-	W 000 265 533	-	W 000 306 070
	8 m	-	-	W 000 265 521	W 000 265 534	-	-
CITORCH T 10 V	5 m	-	W 000 266 169	-	-	-	-
CITORCH T 30 V	5 m	-	W 000 266 170	-	-	-	-
CITORCH T 5 W	5 m	-	-	-	W 000 265 535	-	-
	8 m	-	-	-	-	-	-
CITORCH T 10 W	5 m	W 000 262 057	-	W 000 265 518	W 000 265 537	W 000 266 165	W 000 306 071
	8 m	W 000 262 058	-	W 000 265 517	W 000 265 538	W 000 266 166	W 000 306 072
CITORCH T 10 W F	5 m	-	-	-	W 000 265 536	-	-
CITORCH T 30 W	5 m	-	-	-	W 000 265 539	-	W 000 306 073
	8 m	-	-	W 000 265 516	W 000 265 540	-	W 000 306 074
CITORCH T 35 W	5 m	-	-	-	W 000 266 167	-	-
	8 m	-	-	W 000 265 515	W 000 266 168	-	-
CITORCH T 40 W	5 m	-	-	-	W 000 265 541	-	W 000 306 075
	8 m	-	-	W 000 265 514	W 000 265 542	-	W 000 306 076

Accessories and wear parts for CITORCH T torches

Option for welding where access is difficult.

CITORCH T 40 W
 A - insulating nut
 Cat. no. W 000 306 452
 B - O-ring
 Cat. no. W 000 306 453
 C - water distributor
 Cat. no. W 000 306 454

6 and **10** choice of nozzle

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

• The "collet body" part **3** is supplied with a filter **9** and a ring **7**

• The ring **7** or the filter **9** are supplied on their own.

Ø mm		CITORCH T					
		5 / 5 W	10/10V/10F/ 10W/10WF	20	30 / 30 W	35 W / 40	40 W
1 Back cap	short	-	W 000 265 603	W 000 265 605	W 000 265 605	W 000 265 606	W 000 265 607
	medium	-	W 000 265 608	-	-	-	-
	long	-	W 000 265 610	W 000 265 611	W 000 265 611	W 000 265 612	W 000 265 613
2 Back cap O-ring		-	W 000 265 616	W 000 265 622	W 000 265 622	W 000 265 623	W 000 265 624
3 Sealing ring		W 000 265 628	W 000 265 629	W 000 265 630	W 000 265 630	W 000 265 631	-
4 Electrode collet	1.0	W 000 265 632	W 000 265 633	W 000 265 634	W 000 265 635	W 000 265 636	-
	1.6	W 000 265 637	W 000 265 638	W 000 265 639	W 000 265 640	W 000 265 641	-
	2.0	-	W 000 265 642	W 000 265 643	W 000 265 644	W 000 265 645	-
	2.4	W 000 265 653	W 000 265 654	W 000 265 655	W 000 265 656	W 000 265 657	W 000 265 658
	2.5	-	W 000 265 659	W 000 265 660	W 000 265 661	-	-
	3.2	-	W 000 265 662	W 000 265 663	W 000 265 664	W 000 265 665	W 000 265 666
	4.0	-	-	-	W 000 265 667	W 000 265 668	W 000 265 669
	4.8	-	-	-	-	W 000 265 670	W 000 265 671
5 Collet body	all diameter	-	W 000 265 672	W 000 265 673	W 000 265 674	W 000 265 675	W 000 265 677
	1.0	W 000 265 678	-	-	-	-	-
	1.6	W 000 265 692	-	-	-	-	-
	2.4	W 000 265 693	-	-	-	-	-
6 Nozzle	6	W 000 265 694	W 000 265 695	W 000 265 696	W 000 265 697	W 000 265 697	-
	8	W 000 265 699	W 000 265 700	W 000 265 701	W 000 265 702	W 000 265 702	-
	10	W 000 265 703	W 000 265 704	W 000 265 705	W 000 265 706	W 000 265 706	-
	12	-	W 000 265 707	W 000 265 708	W 000 265 709	W 000 265 709	W 000 265 710
	15	-	-	-	W 000 265 711	W 000 265 711	W 000 265 712
7 Sealing ring		-	W 000 265 713	W 000 265 714	W 000 265 714	W 000 265 715	-
8 Collet body		-	W 000 265 716	-	W 000 265 717	W 000 265 718	-
9 Filter		-	W 000 265 719	W 000 265 720	W 000 265 720	W 000 265 720	W 000 265 720
10 Nozzle	8	-	W 000 265 721	W 000 265 722	W 000 265 722	W 000 265 722	-
	10	-	W 000 265 723	W 000 265 724	W 000 265 724	W 000 265 724	-
	12	-	W 000 265 725	W 000 265 726	W 000 265 726	W 000 265 726	-
	15	-	-	W 000 265 727	W 000 265 727	W 000 265 727	-


WTT torches

Air-cooled torches

Using electrodes form 1.0 to 3.2 mm.

WTT 9
 Duty cycle 35%: 125 A
 Fitted as standard:

- back cap medium
- nozzle Ø 10 mm
- electrode Ø 1.6 mm

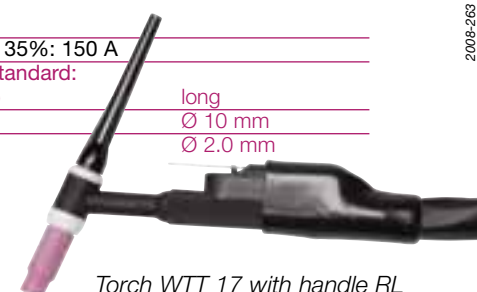


Torch WTT 9 with handle R

2008-255

WTT 17
 Duty cycle 35%: 150 A
 Fitted as standard:

- back cap long
- nozzle Ø 10 mm
- electrode Ø 2.0 mm



Torch WTT 17 with handle RL

2008-263

WTT 26
 Duty cycle 35%: 200 A
 Fitted as standard:

- back cap long
- nozzle Ø 12 mm
- electrode Ø 2.4 mm



Torch WTT 26 with handle EB

2008-269



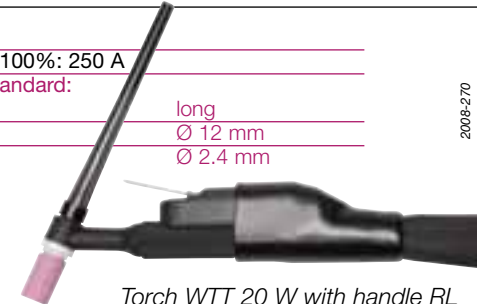
WELDLINE
 Creating a professional environment
 For more choice
www.weldline-alw.com

Water-cooled torches

Using electrodes form 1.0 to 4.0 mm.

WTT 20 W
 Duty cycle 100%: 250 A
 Fitted as standard:

- back cap long
- nozzle Ø 12 mm
- electrode Ø 2.4 mm

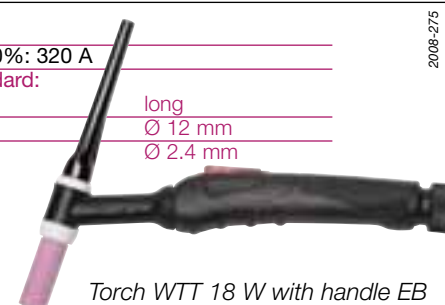


Torch WTT 20 W with handle RL

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WTT 18 W
 Duty cycle 100%: 320 A
 Fitted as standard:

- back cap long
- nozzle Ø 12 mm
- electrode Ø 2.4 mm



Torch WTT 18 W with handle EB

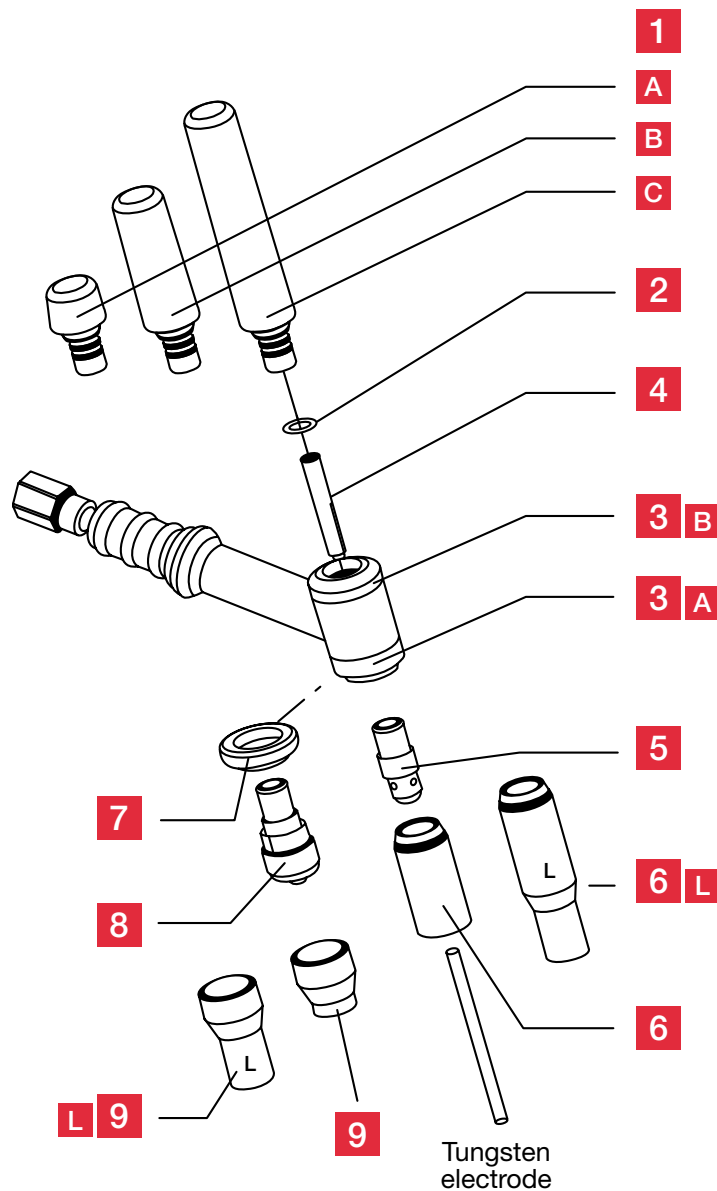
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Torch		Cooling	R V*	RL S*	RL C5B*	EB S*	EB C5B*
WTT9	4 m	Air	W 000 266 434	W 000 306 115	W 000 306 125	W 000 266 572	W 000 306 105
	8 m	Air	-	W 000 306 116	W 000 306 126	W 000 266 571	W 000 306 106
WTT17	4 m	Air	W 000 266 574	W 000 306 117	W 000 306 127	W 000 266 570	W 000 306 107
	8 m	Air	-	W 000 306 118	W 000 306 128	W 000 266 569	W 000 306 108
WTT26	4 m	Air	W 000 266 573	W 000 306 119	W 000 306 129	W 000 266 568	W 000 306 109
	8 m	Air	-	W 000 306 120	W 000 306 130	W 000 266 567	W 000 306 110
WTT18 W	4 m	Water	-	W 000 306 123	W 000 306 133	W 000 266 564	W 000 306 113
	8 m	Water	-	W 000 306 124	W 000 306 134	W 000 266 563	W 000 306 114
WTT20 W	4 m	Water	-	W 000 306 121	W 000 306 131	W 000 266 566	W 000 306 111
	8 m	Water	-	W 000 306 122	W 000 306 132	W 000 266 565	W 000 306 112

* For choice of torch handles and connections, please report to page 34.

TIG torches wear parts

	Ø mm	WTT 9 V WTT 20 W	WTT 17 V WTT 26 V WTT 18 W
1 Back cap	A short	W 000 306 398	W 000 306 399
	B medium	W 000 306 400	-
	C long	W 000 306 402	W 000 306 403
2 Back cap O-ring		W 000 306 404	W 000 306 405
3 A Sealing ring		W 000 306 396	W 000 306 397
3 B Insulating ring		W 000 270 780	W 000 306 395
4 Collet	1.0	W 000 306 406	W 000 306 411
	1.6	W 000 306 407	W 000 306 412
	2.0	W 000 306 408	W 000 306 413
	2.4	W 000 306 409	W 000 306 414
	3.2	W 000 306 410	W 000 306 415
	4.0	-	W 000 306 416
5 Collet body	1.0	W 000 306 376	W 000 306 380
	1.6	W 000 306 377	W 000 306 381
	2.0	W 000 306 378	W 000 270 781
	2.4	W 000 306 455	W 000 306 382
	3.2	W 000 306 379	W 000 306 383
	4.0	-	W 000 306 384
6 Nozzle	6.4	W 000 306 417	W 000 306 423
	8.0	W 000 306 418	W 000 306 424
	9.6	W 000 306 419	W 000 306 425
	11.2	W 000 306 420	W 000 306 426
	12.8	W 000 306 421	W 000 306 427
	16.0	W 000 306 422	W 000 306 428
	19.2	-	W 000 306 461
6 L Long nozzle	4.8	W 000 306 456	-
	6.4	W 000 306 457	W 000 306 462
	8.0	W 000 306 458	W 000 306 463
	9.6	W 000 306 459	W 000 306 464
	11.2	-	W 000 306 465
7 Gas L sealing ring		-	W 000 306 466
8 G.L. collet body	1.0	W 000 306 385	W 000 306 389
	1.6	W 000 306 386	W 000 306 390
	2.0	W 000 306 460	-
	2.4	W 000 306 387	W 000 306 391
	3.2	W 000 306 388	W 000 306 392
	4.0	-	W 000 306 393
9 Gas L nozzle	6.4	W 000 306 429	W 000 306 434
	8.0	-	W 000 306 435
	9.6	W 000 306 431	W 000 306 436
	11.2	W 000 306 432	W 000 306 437
	12.8	W 000 306 433	W 000 306 438
	16.0	-	W 000 306 438
9 L Long GL nozzle	8.0	-	W 000 306 467
	9.6	-	W 000 306 468
	11.2	-	W 000 306 469
	12.8	-	W 000 306 470



2

Tungsten electrodes



0254-034

Comparison of electrode properties*

Electrode type	Metal type	Arc stability	Arc striking	Durability	Thermal resistance		
Pure tungsten	Light alloys	**	*	*	*	***	Excellent
Tungsten thorium	Steels and inox	*	***	**	**	**	good
Tungsten cerium	Steels and inox	**	*	**	**	*	Average
Tungsten lanthanum	All	**	***	***	***		

* Colour code is in accordance to the requirements DIN/EN 26848 and printed on the electrode end.

WELDLINE tungsten electrodes

Pure tungsten

Ø mm	Current (A) DC welding	Cat. no.	
		Length 150 mm	Length 175 mm
1.0	10-50	W 000 010 009	-
1.6	40-80	W 000 010 010	W 000 010 375
2.0	60-110	W 000 010 011	W 000 010 376
2.4	70-120	W 000 010 012	W 000 010 377
3.0	90-180	W 000 010 013	-
3.2	90-180	W 000 010 014	W 000 010 378
4.0	160-240	W 000 010 015	W 000 010 379



2277-036



Tungsten with oxide additives: lanthanum, thorium and cerium

Ø mm	Current (A) DC welding	Cat. no. thorium		Cat. no. cerium		Cat. no. lanthanum	
		Length 150 mm	Length 175 mm	Length 150 mm	Length 175 mm	Length 150 mm	Length 175 mm
1.0	10-80	W 000 010 002	W 000 010 029	W 000 010 022	-	W 000 010 373	-
1.6	50-120	W 000 010 003	W 000 010 030	W 000 010 023	W 000 010 380	W 000 010 016	W 000 010 385
2.0	90-190	W 000 010 004	W 000 010 390	W 000 010 024	W 000 010 381	W 000 010 017	W 000 010 386
2.4	100-230	W 000 010 005	W 000 010 031	W 000 010 025	W 000 010 382	W 000 010 018	W 000 010 387
3.0	170-300	W 000 010 006	-	W 000 010 026	-	W 000 010 019	-
3.2	170-300	W 000 010 007	W 000 010 032	W 000 010 027	W 000 010 383	W 00 0010 020	W 000 010 388
4.0	260-450	W 000 010 008	W 000 010 374	W 000 010 028	W 000 010 384	W 000 010 021	W 000 010 389

Accessories

Maintenance box

A comprehensive kit for all your applications. The box includes for each torch: complete sets of electrode collets, nozzles, back caps and a collet body.



Citorch 5/5W	W 000 306 446
Citorch T 10/10F/10V/10W	W 000 306 447
Citorch T 20	W 000 306 448
Citorch T 30/30W	W 000 306 449
Citorch T 40/35W	W 000 306 450
Citorch T 40W	W 000 306 451

Extension assemblies

The extension harnesses are 15 m long and fitted with quick-fit connectors and "banana" and "5-pin" type trigger plugs. The connectors are protected by a leather cover with "velcro" fasteners.

For torches with separate gas pipe (S or C5B):

- air-cooled version W 000 143 238
- water-cooled version W 000 143 239



For torches with central gas pipe (CC5B):

- air-cooled version W 000 143 240
- water-cooled version W 000 143 241

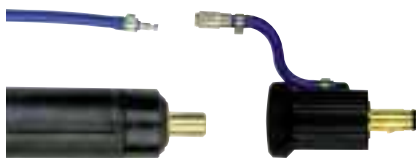
Adapters

Torch with central gas to power supply with separate gas.



Cat. no. W 000 142 708

Torch with separate gas to power supply with central gas.



Cat. no. W 000 142 709

CITORCH T 10 V on power source with 50 mm² socket.



Cat. no. W 000 306 139

Sharpening machine TIG-SHARP tungsten electrode



Longitudinal sharpening, precise and symmetrical angle.

Individual case including:

- sharpening machine,
- a square for blocking in fixed position on a bench,

Technical characteristics:

- Supply voltage: 220-230 V
- Frequency: 50-60 Hz
- Power: 400 W
- Amperage: 1.8 A
- Rotating speed: 30 000 tr/min
- Weight: 1.85 kg
- Conformance to CE standard

- a standard blue head for electrode \varnothing 1.6 / 2.0 / 2.4 / 3.2,
- an aspiration nozzle connecting to the aspiration system for extracting tungsten dust,
- electrode holder, assembling/disassembling of tools.

Cat. no. W 000 011 035

Options:

- Red head for electrodes \varnothing 1.0/4.0/4.8/6.0
Cat. no. W 000 011 037
- Diamond disc replacement **Cat. no. W 000 011 036**

TIG POINT

Chemical sharpening of tungsten electrodes.

Cat. no. W 000 011 101

