

# Chapter 4

## Plasma cutting



# Plasma cutting

## Primary power supply cable connection:

Single-phase 230 V = connection between phase and neutral

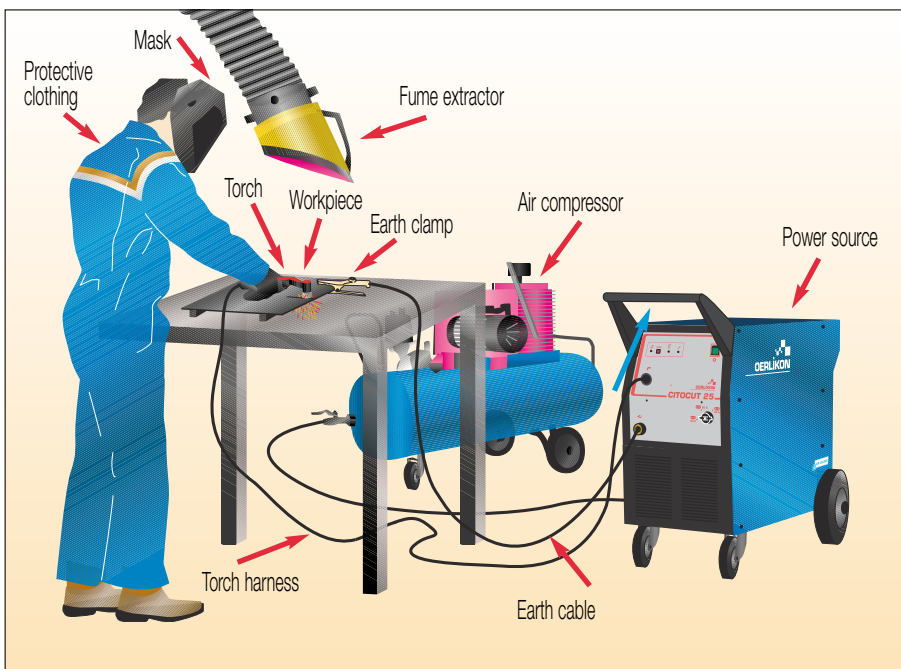
400 V = connection between 2 phases

Three-phase 400 V = connection between 3 phases

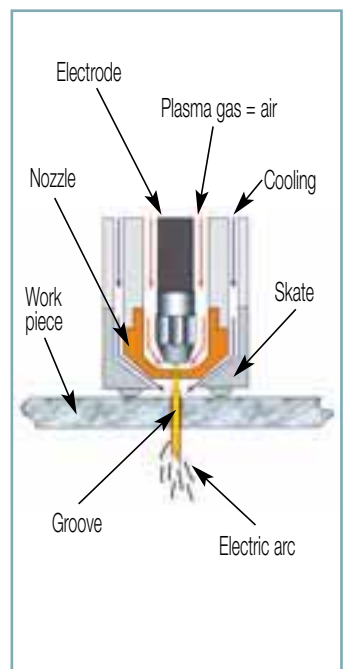
230 V = connection between 3 phases

## Plasma cutting overview and quick choice criteria

Always connect the earth cable. Refer to technical instructions.

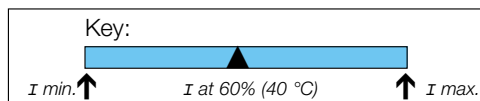


## Cutting operation



## Choice criteria for plasma power sources

Name of product	Power supply	Cutting capacity		Cutting current							Torch	Number of setting positions (range)	Weight (kg)			
		Quality	Separation	20	40	60	80	100	120	140						
<b>CITOCUT KOMPRESSOR</b>	Single-phase	4 mm	6 mm	■									<b>CITORCH P 5</b>	∞	12	
<b>CITOCUT 10i</b>	Single-phase	8 mm	10 mm	■▲									<b>CITORCH P 10</b>	∞	8	
<b>CITOCUT 20i</b>	Three-phase	20 mm	25 mm	■▲									<b>CITORCH P 25</b>	∞	25	
<b>CITOCUT 25</b>	Three-phase	20 mm	25 mm	■▲									<b>CITORCH P 30</b>	3	80	
<b>CITOCUT 40i</b>	Three-phase	35 mm	40 mm	■▲									<b>CITORCH P 45</b>	∞	35	
<b>CITOCUT 40</b>	Three-phase	35 mm	40 mm	■▲									<b>CITORCH P 40</b>	4	125	
<b>NERTAJET 50</b>	Three-phase	40 mm	50 mm	■▲										<b>Z 5.0</b>	5	260



A complete range of heavy duty plasma cutters from the plasma process specialists. The OERLIKON plasma range has global recognition as the solution for all on-site applications with a range of machines which are simple, robust and ready to use. The inverter microprocessor controlled units provide excellent cut quality due to OERLIKON patented consumables.

### Plasma Cutting Glossary

#### The principles of plasma cutting

Plasma cutting can be used for all conductive materials.

The plasma jet is formed due to an electric arc created between an electrode and the work piece to be cut.

#### Distance cutting

With short nozzles and skirts, special adaption for rectilinear cutting guided with a gauge.

#### Drag cutting

With a thin and long nozzle, it allows a very precise cut following a layout, and ideal angle cutting avoiding arc interruptions.



# Portable installations

## CITOCUT Kompressor with CITORCH P 5 torch and wear parts

**Cutting capacity:**

- Severance cut: 8 mm
- Quality cut: 4 mm

**The portable solution with built-in compressor for manual plasma cutting**

**9 product advantages:**

- Cut up to 6 mm (severance cut on carbon steel)
- Light weight: easy to transport
- Drag cutting
- Low air and current consumption
- Cutting capacity without earth cable, up to 2 mm sheet thickness
- Cuts all metals
- Arc pilot without high frequency (HF)
- Digital parameter display
- High operator safety due to the new CITORCH P 5 torch

	Power supply	Primary consumption (I max.)	Effective consumption	Open circuit voltage	Cutting current	Duty cycle 10 min. cycle (at 40 °C)	Air pressure and flowrate	Protection index	Insulation class	Dimensions (l x w x h)	Net weight	Standards
<b>Standard model</b>	230 V ± 10% 1 ph 50-60 Hz	16 A	11 A	300 V	10 - 20 A	20 A (50%)	built-in compressor	IP 23	H	410 x 180 x 310 mm	12 kg	EN 60974-1; EN 60974-7; EN 60974-10
<b>110 V model</b>	110 V 1 ph 50-60 Hz	29 A	13 A	240 V	10 - 20 A	20 A (20%)	built-in compressor	IP 23	H	440 x 185 x 310 mm	12 kg	EN 60974-1; EN 60974-7; EN 60974-10

**To order**

• **Standard model ready to use:**

- 1 CITOCUT Kompressor (230 V 1 ph) with 3 m primary cable
- 1 CITORCH P 5 cutting torch 4 m
- 1 earth cable 3 m with clamp
- 1 set of wear parts

**Cat. no. W 000 260 941**

• **110 V model ready to use:**

- 1 CITOCUT Kompressor (110 V 1 ph) with 3 m primary cable
- 1 CITORCH P 5 cutting torch 4 m
- 1 earth cable 3 m with clamp
- 1 set of wear parts

**Cat. no. W 000 264 805**



**To order**

• **Accessories:**

- FASHION goggles  
Cat. no. W 000 011 061
- PROTECT COMFORT T9 gloves  
Cat. no. W 000 010 425
- PROTECT COMFORT T1 gloves  
Cat. no. W 000 010 426

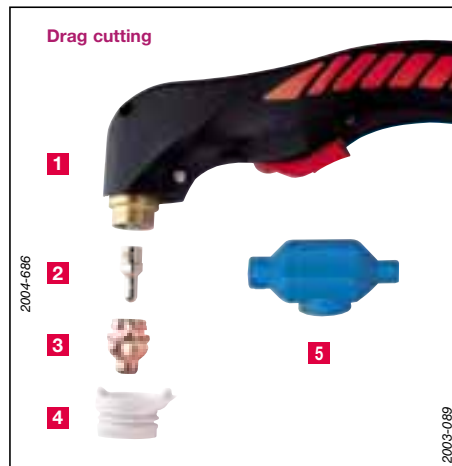
• **Option:**

- Compass  
Cat. no. W 000 302 512

**CITORCH P 5 torch for drag cutting**

Maximum current at 60%: 20 A

Plasma gas: air



**Wear parts for CITORCH P 5 torch**

**To order**

• **Air-cooled 4 m torch:**

- CITORCH P 5 Cat. no. W 000 302 645

• **Wear parts:**

- 1** Torch body Cat. no. W 000 266 530
- 2** FL electrode Cat. no. W 000 302 589
- 3** L 0.65 nozzle Cat. no. W 000 302 628
- 4** TN skirt Cat. no. W 000 302 632
- 5** Wrench Cat. no. W 000 302 612

# CITOCUT 10i with CITORCH P 10 torch and wear parts

**Cutting capacity:**  
• Severance cut: 10 mm  
• Quality cut: 8 mm

## The high-tech portable solution for manual plasma cutting

### 11 product advantages:

- Compact and light for easy transportation
- Severance cut up to 10 mm (carbon steel)
- Cutting capacity up to 2 mm without earth cable
- Drag cutting
- Digital parameter display
- Increased safety due to the new CITORCH P 10 torch
- Arc pilot without high frequency (HF)
- Cuts all metals
- Torch with double action trigger
- Reliable, robust and ergonomic
- Low air and current consumption

Power supply	Primary consumption (I max.)	Effective consumption	Open circuit voltage	Cutting current	Duty cycle 10 min. cycle (at 40 °C)	Air pressure and flowrate	Protection index	Insulation class	Dimensions (l x w x h)	Net weight	Standards
230 V ± 10% 1 ph 50-60 Hz	23 A	14 A	300 V	10 - 30 A	30 A (35%) 25 A (60%) 20 A (100%)	4 bars 100 l/min.	IP 23	H	380 x 150 x 310 mm	8 kg	EN 60974-1; EN 60974-7; EN 60974-10

### To order

- Installation ready to use including:
    - 1 CITOCUT 10i with 3 m primary cable
    - 1 CITORCH P 10 cutting torch 5 m
    - 1 earth cable 3 m with clamp
    - 1 set of wear parts
    - 1 air hose 5 m
- Cat. no. W 000 261 819**



### To order

- Accessories:
  - FASHION goggles Cat. no. W 000 011 061
  - PROTECT COMFORT T9 gloves Cat. no. W 000 010 425
  - PROTECT COMFORT T1 gloves Cat. no. W 000 010 426
- Option:
  - Compass Cat. no. W 000 302 512

## CITORCH P 10 torch for drag cutting

Maximum current at 35%: 30 A  
Plasma gas: air



## Wear parts for CITORCH P 10 torch

### To order

- Air-cooled 5 m torch:
  - CITORCH P 10 Cat. no. W 000 302 646
- Wear parts:
  - 1 Torch body Cat. no. W 000 266 531
  - 2 FL electrode Cat. no. W 000 302 589
  - 3 FL 0.8 nozzle (0.5 mm to 10 mm) Cat. no. W 000 302 586
  - 4 TN skirt Cat. no. W 000 302 632
  - 5 Wrench Cat. no. W 000 302 612

# Portable installations

**Cutting capacity:**

- Severance cut: 25 mm
- Quality cut: 20 mm

## CITOCUT 20i with CITORCH P 25 and wear parts

### Quality and reliability

#### 11 product advantages:

- Unequaled quality cut on 20 mm thickness
- Powerful - maximum cut up to 25 mm (carbon steel)
- Digital parameter display
- 3 cutting modes (drag/distance/grid) and gouging
- Compact and portable solution

- Kit for automatic application (option)
- Striking with blow-back (without HF)
- Primary autolink system
- Auto restart
- Reliable, robust and ergonomic
- Torch with double action trigger

Power supply	Primary consumption (I max.)	Effective consumption	Open circuit voltage	Cutting current	Duty cycle 10 min. cycle (at 40 °C)	Air pressure and flowrate	Protection index	Insulation class	Dimensions (l x w x h)	Net weight	Standards
230 V 400 V ± 10% 3 ph (autolink) 50-60 Hz	20.9 A - 400 V 32 A - 230 V	16.2 A (400 V) 24.8 A (230 V)	310 V 250 V	20 - 65 A	65 A (60%) 50 A (100%) 40 A (100%)	5 bars 180 l/min.	IP 23 S	H	435 x 235 x 380 mm	25 kg	EN 60974-1; EN 60974-7; EN 60974-10

**To order**

- Installation ready to use including:
  - 1 CITOCUT 20i with 6 m primary cable
  - 1 CITORCH P 25 cutting torch 5 m
  - 1 earth cable 3 m with clamp
  - 1 air hose 5 m
  - 1 set of wear parts

**Cat. no. W 000 262 494**



**To order**

- Accessories:
  - FASHION goggles Cat. no. W 000 011 061
  - PROTECT COMFORT T9 gloves Cat. no. W 000 010 425
  - PROTECT COMFORT T1 gloves Cat. no. W 000 010 426
- Options:
  - Kit auto Cat. no. W 000 265 597
  - Compass Cat. no. W 000 302 512

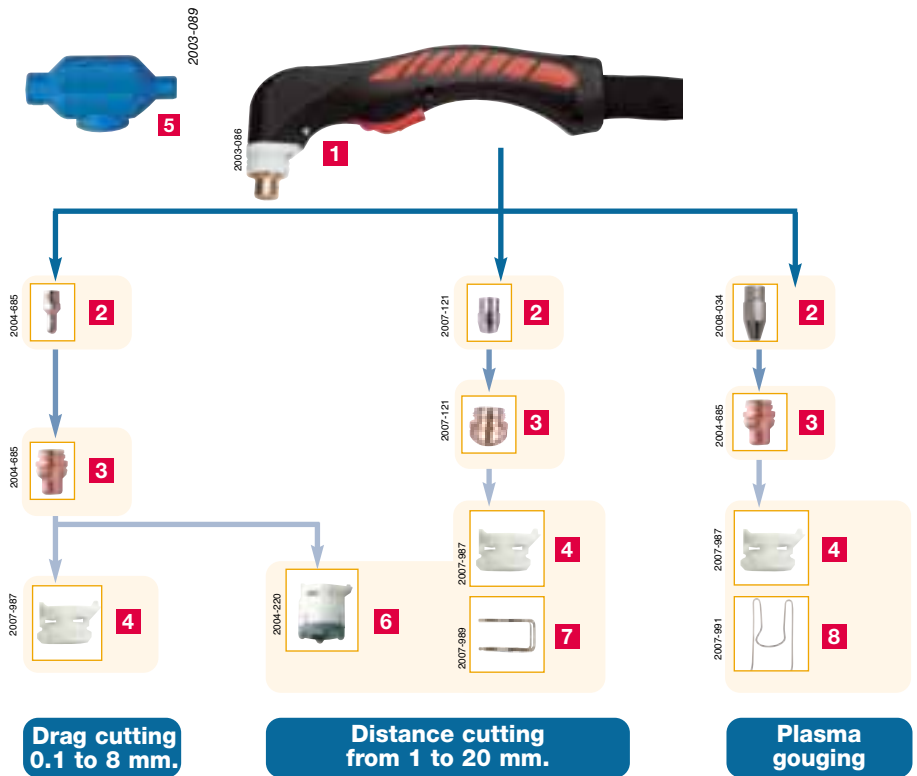
### CITORCH P 25 for drag and distance cutting

Maximum current at 60%: 65 A  
Plasma gas: air

### Wear parts for CITORCH P 25

**To order**

- Air-cooled torch:
  - CITORCH P 25 - 5 m Cat. no. W 000 302 647
  - CITORCH P 25 - 12 m Cat. no. W 000 302 648
- Wear parts:
  - 1 Torch body Cat. no. W 000 266 531
  - 5 Wrench Cat. no. W 000 302 612
- Wear part for drag cutting:
  - 2 FL electrode Cat. no. W 000 302 589
  - 3 Nozzle L 1.0 Cat. no. W 000 302 587
  - 3 Nozzle L 1.2 Cat. no. W 000 302 588
  - 4 TN skirt Cat. no. W 000 302 632
- Wear part for distance cutting:
  - 2 C electrode Cat. no. W 000 302 593
  - 3 Nozzle C 1.0 Cat. no. W 000 302 584
  - 3 Nozzle C 1.2 Cat. no. W 000 302 585
  - 4 TN skirt Cat. no. W 000 302 632
  - 6 TI skirt Cat. no. W 000 302 590
  - 7 Skate 60 A Cat. no. W 000 302 598
- Wear part for plasma gouging:
  - 2 L electrode Cat. no. W 000 270 041
  - 3 Nozzle G 2.0 Cat. no. W 000 302 527
  - 4 TN skirt Cat. no. W 000 302 632
  - 8 Skate for gouging 60 A Cat. no. W 000 302 531



# CITOCUT 40i with CITORCH P 45 and wear parts

**Cutting capacity:**  
 • Severance cut: 40 mm  
 • Quality cut: 35 mm

## Quality and reliability

### 12 product advantages:

- Powerful - maximum cut up to 40 mm (carbon steel)
- Digital parameter display
- 3 cutting modes (drag/distance/grid) and gouging
- Compact
- Reliable and robust for heavy duty use
- Kit for automatic application (option)
- Trolley optional
- Auto restart
- Clean starting, no high frequency (HF)
- Drag cutting, up to 10 mm sheet with reduced fume emission
- Quick connection torch with patented consumables parts
- Industrial application

Power supply	Primary consumption (I max.)	Effective consumption	Open circuit voltage	Cutting current	Duty cycle 10 min. cycle (at 40 °C)	Air pressure and flowrate	Protection index	Insulation class	Dimensions (l x w x h)	Net weight	Standards
400 V ±10% 3 ph 50-60 Hz	40.3 A	31.2 A	458 V	10 - 120 A	120 A (60%) 100 A (100%)	5 bars 200 l/min.	IP 23 S	H	720 x 310 x 430 mm	35 kg	EN 60974-1; EN 60974-7; EN 60974-10

### To order

#### • Installation ready to use including:

- 1 CITOCUT 40i
- 1 CITORCH P 45 cutting torch 6 m
- 1 earth cable 3 m with clamp
- 1 set of wear parts
- 1 air hose 5 m

**Cat. no. W 000 262 495**



### To order

#### • Accessories:

- FASHION goggles  
Cat. no. W 000 011 061
- PROTECT COMFORT T9 gloves  
Cat. no. W 000 010 425
- PROTECT COMFORT T1 gloves  
Cat. no. W 000 010 426

#### • Options:

- Trolley - Cat. no. W 000 265 598
- Kit auto - Cat. no. W 000 265 597
- Compass - Cat. no. W 000 302 512

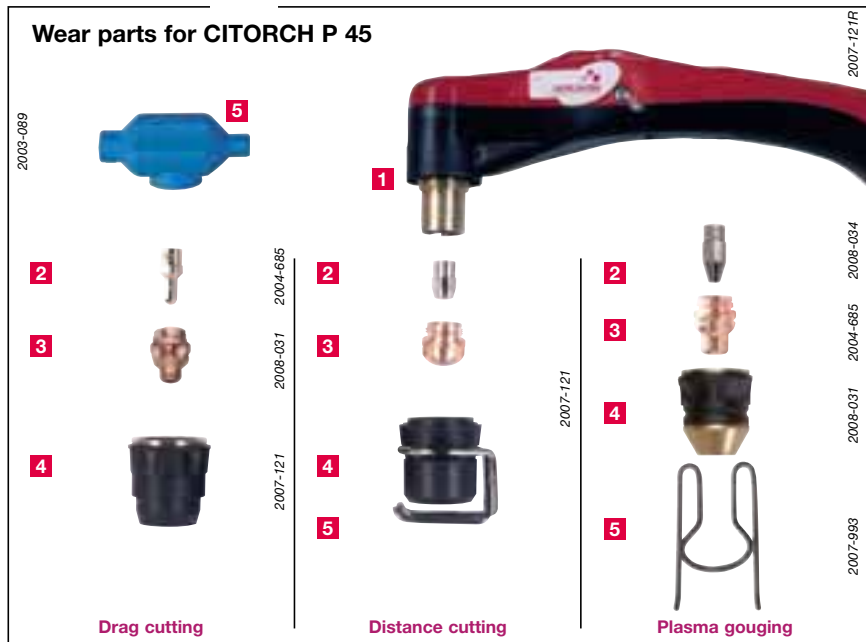
## CITORCH P 45 for drag and distance cutting

Maximum current at 60%: 120 A  
Plasma gas: air

### To order

- Air-cooled 6 m torch:  
- CITORCH P 45 Cat. no. W 000 302 649
- Air-cooled 15 m torch:  
- CITORCH P 45 Cat. no. W 000 302 650
- Wear parts:  
1 Torch body Cat. no. W 000 266 535  
5 Wrench Cat. no. W 000 302 612
- Wear part for drag cutting:  
2 FL electrode Cat. no. W 000 302 589  
3 Nozzle FL 0.65 Cat. no. W 000 302 628  
3 Nozzle FL 0.8 Cat. no. W 000 302 586  
3 Nozzle L 1.0 Cat. no. W 000 302 587  
3 Nozzle L 1.2 Cat. no. W 000 302 588  
4 Drag skirt 120 A Cat. no. W 000 302 521
- Wear part for distance cutting:  
2 C electrode Cat. no. W 000 302 593  
3 Nozzle C 1.0 Cat. no. W 000 302 584  
3 Nozzle C 1.2 Cat. no. W 000 302 585  
3 Nozzle C 1.4 Cat. no. W 000 302 525  
3 Nozzle C 1.6 Cat. no. W 000 270 006  
4 Distance skirt Cat. no. W 000 302 520  
5 Skate 120 A Cat. no. W 000 302 518

### Wear parts for CITORCH P 45



#### • Wear part for plasma gouging:

- 2 L electrode Cat. no. W 000 270 041
- 3 Nozzle G 2.2 Cat. no. W 000 302 529
- 4 Skirt for gouging 120 A Cat. no. W 000 302 536
- 5 Skate for gouging 120 A Cat. no. W 000 302 533

# On site and workshop installations

**Cutting capacity:**

- Severance cut: 25 mm
- Quality cut: 20 mm

## CITOCUT 25 with CITORCH P 30 torch and wear parts

### Work of high quality and precision

#### 9 product advantages:

- Universal cutting installation for all metals
- Very fast quality cutting up to 25 mm
- 3 ranges of power setting: range 1 from 0,5 to 12 mm range 2 from 3 to 20 mm, range 3 from 8 to 25 mm
- Torch wear parts optimisation device

- Simple and multi-use, for drag and distance cutting
- Reliable and robust for heavy duty use
- Torch with double trigger for safety
- Multi voltage installation
- Fitted wheels

Power supply	Primary consumption (I max.)	Effective consumption	Open circuit voltage	Cutting current	Duty cycle 10 min. cycle (at 40 °C)	Air pressure and flowrate	Protection index	Insulation class	Dimensions (l x w x h)	Net weight	Standards
220 V 230 V 380 V 400 V ±10% 3 ph 50-60 Hz	49 A (220 V) 47 A (230 V) 28.5 A (380 V) 27 A (400 V)	31 A (220 V) 29.5 A (230 V) 18 A (380 V) 17 A (400 V)	232 V	30 - 50 - 80 A	80 A (40%) 50 A (80%) 30 A (100%)	5 bars 180 l/min.	IP 23	H	500 x 855 x 755 mm	80 kg	EN 60974-1; EN 60974-7; EN 60974-10

#### To order

##### • Installation ready to use including:

- 1 CITOCUT 25 three-phase 230/400 V with primary cable 6 m
- 1 cutting torch length 5 m
- 1 earth cable 3 m with clamp
- 1 air hose 5 m
- 1 set of wear parts

**Cat. no. W 000 261 829**

##### • Options:

- Compass  
Cat. no. W 000 302 512

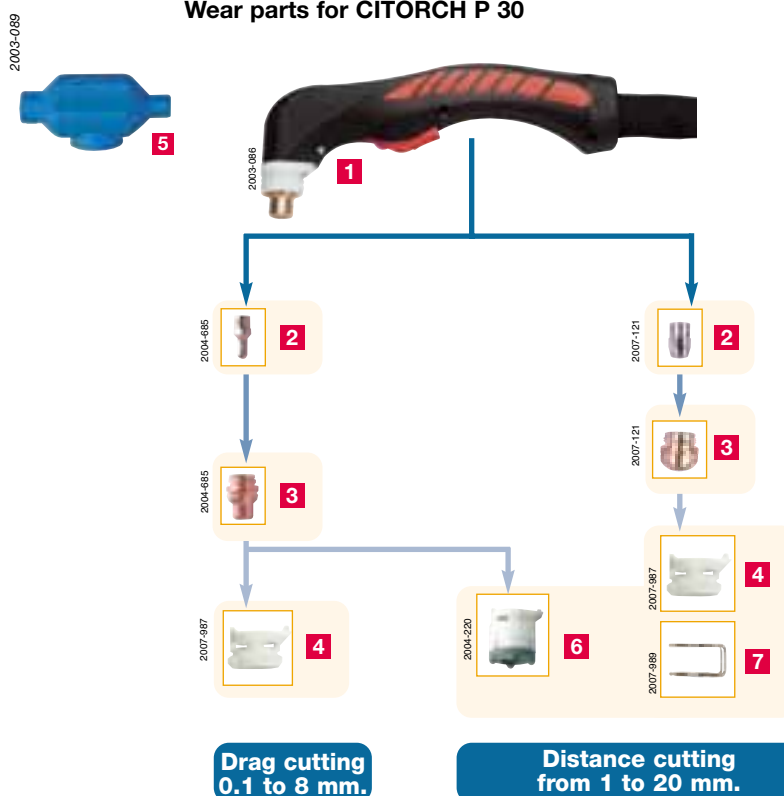


### CITORCH P 30 for drag and distance cutting

Maximum current at 60%: 80 A

Plasma gas: air

#### Wear parts for CITORCH P 30



#### To order

##### • Air-cooled torch:

- CITORCH P 30 - 5 m  
Cat. no. W 000 302 677

##### • Wear parts:

- 1 Torch body Cat. no. W 000 266 531
- 5 Wrench Cat. no. W 000 302 612

##### • Wear part for drag cutting:

- 2 FL electrode Cat. no. W 000 302 589
- 3 Nozzle L 1.2 Cat. no. W 000 302 588
- 4 TN skirt Cat. no. W 000 302 632

##### • Wear part for distance cutting:

- 2 C electrode Cat. no. W 000 302 593
- 3 Nozzle C 1.0 Cat. no. W 000 302 584
- 3 Nozzle C 1.2 Cat. no. W 000 302 585
- 3 Nozzle C 1.4 Cat. no. W 000 302 525
- 4 TN skirt Cat. no. W 000 302 632
- 6 TI skirt Cat. no. W 000 302 590
- 7 Skate 60 A Cat. no. W 000 302 598

**Cutting capacity:**  
 • Severance cut: 40 mm  
 • Quality cut: 35 mm

## CITOCUT 40 with CITORCH 40 torch and wear parts

**Work of high quality and precision**

### 9 product advantages:

- More power to cut large thicknesses up to 40 mm sheet
- Delivered complete with torch maintenance kit
- Torch wear parts optimisation device
- Simple and multi-use. The ideal tool for drag and distance cutting
- Multi-voltage installations

- Starting with blow-back (without HF)
  - Reliable and robust for a heavy duty use
  - Torch with patented wear parts
- 4 ranges of power setting:
- range 1: 0.5 to 15 mm
  - range 2: 3 to 25 mm
  - range 3: 8 to 35 mm
  - range 4: 8 to 40 mm
- Fitted wheels

Power supply	Primary consumption (I max.)	Effective consumption	Open circuit voltage	Cutting current	Duty cycle 10 min. cycle (at 40 °C)	Air pressure and flowrate	Protection index	Insulation class	Dimensions (l x w x h)	Net weight	Standards
220 V 230 V 380 V 400 V ±10 % 3 ph 50-60 Hz	74 A (220 V) 71 A (230 V) 42 A (380 V) 40 A (400 V)	52 A (220 V) 50 A (230 V) 30 A (380 V) 28 A (400 V)	232 V	35 - 120 A	120 A (50%) 85 A (75%) 50 A (100%)	5 bars 200 l/min.	IP 23	H	500 x 855 x 705 mm	125 kg	EN 60974-1; EN 60974-7; EN 60974-10

### To order

- Installation ready to use including:
  - 1 CITOCUT 40 with primary cable 6 m
  - 1 cutting torch length 6 m
  - 1 earth cable 3 m with clamp
  - 1 air hose 5 m
- Cat. no. W 000 261 828**
- Option:
  - Compass  
Cat. no. W 000 302 512



## CITORCH P 40 for drag and distance cutting

Maximum current at 60%: 120 A  
Plasma gas: air

### To order

- Air-cooled 6 m torch:
  - CITORCH P 40 Cat. no. W 000 302 651
- Air-cooled 15 m torch:
  - CITORCH P 40 Cat. no. W 000 302 652
- Wear parts:
  - 1** Torch body Cat. no. W 000 266 535
  - 5** Wrench Cat. no. W 000 302 612
- Wear part for drag cutting:
  - 2** FL electrode Cat. no. W 000 302 589
  - 3** Nozzle L 1.0 Cat. no. W 000 302 587
  - 3** Nozzle L 1.2 Cat. no. W 000 302 588
  - 4** Drag skirt 120 A Cat. no. W 000 302 521
- Wear part for distance cutting:
  - 2** C electrode Cat. no. W 000 302 593
  - 3** Nozzle C 1.4 Cat. no. W 000 302 525
  - 3** Nozzle C 1.6 Cat. no. W 000 270 006
  - 3** Nozzle C 1.8 Cat. no. W 000 302 522
  - 6** Distance skirt Cat. no. W 000 302 520
  - 7** Skate 120 A Cat. no. W 000 302 518

### Wear parts for CITORCH P 40



# On site and workshop installation

**Cutting capacity:**  
• Severance cut: 50 mm

## NERTAJET 50 with Z 5.0 torch and wear parts

### Work of high quality and precision with contact cutting

#### 10 product advantages:

- Multi-voltage three-phase
- Intensive work
- 100% duty cycle
- Well suited for stainless steels and light alloys with Ar/H<sub>2</sub> up to 50 mm
- Plasma gouging
- Manual or automatic applications

- Assistance gas use possible to improve quality cutting in large thickness
- Water cooled torches
- Chopper (secondary power transitions) technology.
- 5 ranges of power setting:
  - range 1: 0.5 to 6 mm
  - range 2: 2 to 13 mm
  - range 3: 4 to 25 mm
  - range 4: 8 to 35 mm
  - range 5: 10 to 50 mm

Power supply	Primary consumption (I max.)	Effective consumption	Open circuit voltage	Cutting current	Duty cycle 10 min. cycle (at 40 °C)	Air pressure and flowrate	Protection index	Insulation class	Dimensions (l x w x h)	Net weight	Standards
230 V 400 V 415 V 440 V ±10% 3 ph 50-60 Hz	108.8 A (230 V) 62.6 A (400 V) 60.3 A (415 V) 56.9 A (440 V)	108.8 A (230 V) 62.6 A (400 V) 60.3 A (415 V) 56.9 A (440 V)	356 V	20 - 150 A	150 A (100%)	6 bars 170 l/min.	IP 23 S	H	1 170 x 710 x 1 200 mm	260 kg	EN 60974-1; EN 60974-7; EN 60974-10

#### To order

- 1 NERTAJET 50 three-phase 50/60 Hz,  
**Cat. no. W 000 305 077**

#### • Installations ready to use:

##### - Package "air" including:

- power source
- 1 torch 6 m
- 3 m earth cable with clamp
- 1 air hose 5 m
- 1 set of wear parts
- 1 protection kit

##### **Cat. no. W 000 305 078**

##### - Package "Ar/H<sub>2</sub> and N<sub>2</sub>" including :

- power source
- 1 torch 6 m
- 3 m earth cable with clamp
- 5 m air hose
- 1 set of wear parts
- 1 protection kit

##### **Cat. no. W 000 305 079**



#### To order

#### • Option:

- Compass  
**Cat. no. W 000 302 512**

#### Wear parts for Z 5.0 torch

#### • Wear parts:

- 1 Torch body **Cat. no. W 000 302 513**
- 2 Immersion tube **Cat. no. 04 091 202**
- 7 Electrode key **Cat. no. 04 091 203**
- 8 Hexagonal key **Cat. no. 04 089 240**

#### • Wear parts for distance cutting:

- 3 Argon Hydrogen electrode **Cat. no. W 000 325 065**
- 4 Compressed air electrode **Cat. no. W 000 325 063**
- 5 Nozzle Ø 1.0 40 A **Cat. no. W 000 325 067**
- 5 Nozzle Ø 1.2 60 A **Cat. no. W 000 325 069**
- 5 Nozzle Ø 1.6 100 A **Cat. no. W 000 325 072**
- 5 Nozzle Ø 1.8 150 A **Cat. no. W 000 325 073**
- 6 P flat skirt **Cat. no. W 000 302 516**

#### • Wear parts for gouging (air, N<sub>2</sub>, Ar/Ar<sub>2</sub>):

- 9 Argon Hydrogen electrode **Cat. no. W 000 325 065**
- 10 Nitrogen electrode **Cat. no. W 000 325 064**
- 10 Compressed air electrode **Cat. no. W 000 325 063**
- 11 Gouging nozzle **Cat. no. W 000 302 515**
- 12 C Conical skirt **Cat. no. W 000 302 517**

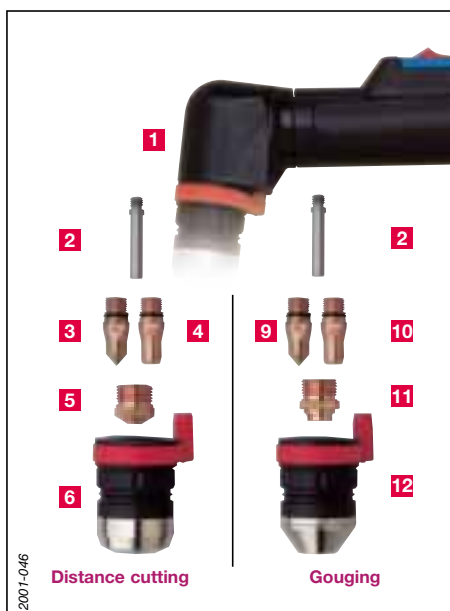
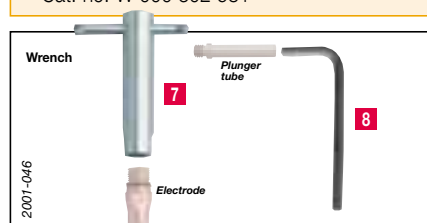
### Torch for distance cutting and gouging

Maximum current at 100%: 150 A

Plasma gas: air, Nitrogen, Ar/H<sub>2</sub>

#### To order

- Primary cable 5 m for input voltage 230 V:  
- **Cat. no. W 000 010 104**
- Primary cable 5 m for input voltage 400/440 V:  
- **Cat. no. W 000 010 103**
- Water-cooled 6 m torch:  
- **Cat. no. W 000 302 580**
- Water-cooled 15 m torch:  
- **Cat. no. W 000 302 581**



# BLUE SKY

## International Guarantee Charter



## The Air Liquide Welding Commitment.

### The BLUE SKY guarantee periods are as follows:

- **3 years for all welding/cutting manual power sources belonging to the “Industrial Range” (list available on request).**
- **2 years for all welding/cutting manual power sources belonging to the “Professional & Craftsmen range” (list available on request).**
- **2 years for welding helmet cells.**
- **1 year for all components of welding/cutting automatic and robotic installations.**
- **6 months for welding blowpipes and pressure regulators.**
- **3 months for guns, torches, harnesses, welding helmets and spare parts.**

These guarantee periods apply to use in an 8 hour shift per day.

All guarantee periods begin from the date of invoice. The guarantee covers parts and direct labour engaged by Air Liquide Welding.

### General conditions:

To benefit from the **BLUE SKY** guarantee, the purchaser must inform **ALW's sales organisation** in writing of defects it attributes to the equipment within 15 days and provide all documentary proof as well as assistance to enable ALW to locate these defects and correct them.

Once ALW has received this notification, it will instruct the purchaser of the procedure to follow for the guarantee claim.

In particular, the guarantee clause shall be applied only in so far as the serial number or the batch number, as well as a photocopy of the invoice for the equipment in question, are enclosed with the request.

When a request is made by the purchaser and accepted by ALW in the framework of the **BLUE SKY** guarantee, ALW reserves the right to select one of the following solutions as it deems appropriate:

- repair, either in its plants, or at the distributor's premises, or at the premises of the customer, or at the premises of a third party selected by ALW,
- replacement, ALW does not grant credit notes in the framework of its guarantee. The replacement of an item by a new one is allowed only under the following conditions:
  - the item is defective at the time of delivery and is returned in its original packaging or in the packaging of the equipment for which it is exchanged,
  - in all cases in which ALW feels that repair is not appropriate. ALW reserves the right to request that the item(s) be returned for expert appraisal.

### The BLUE SKY guarantee does not apply to:

- wearing parts (bulbs, fuses, tips, nozzles, sheaths, tubing, electric cables, hoses, etc.),
- replacements or repairs resulting from normal wear of the equipment, from its misuse (particularly in an environment for which the equipment was not intended), from non-compliance with operating or maintenance instructions, from maintenance, monitoring, or storage or

handling defects or from negligence or malice,

- anomalies resulting from the use of non- ALW original parts or equipment,
- damage associated with transport.

Additionally, this guarantee shall be terminated if the customer carries out repairs or modifications on the equipment, or allows repairs or modifications to be carried out by a third party, without written approval from ALW. Finally, servicing operations or replacements carried out under the guarantee do not result in an extension of said guarantee.

**No guarantee other than the one defined by this document, particularly relating to loss of potential earnings, operating losses, production losses or third party claims, shall be binding on ALW. Except in the case of express agreement to the contrary between the parties, ALW does not guarantee industrial or economic results. ALW remains liable for the legal warranty as regards latent defects.**

### Provisions applicable to ALW distributors:

For distributors, all guarantee periods take effect from the date of invoice, increased by 3 months for Europe and 6 months outside Europe.

The distributors guarantee their customers for at least the minimum periods stipulated in the framework of the **BLUE SKY** guarantee, as of the date of their own bill of sale. Any guarantee extension which they grant their customers is done solely at the expense and under the responsibility of the distributors.

As the guarantee covers parts and labour for the end-user customer, servicing costs and labour are assumed by the distributor with respect to end-user customers.

Any defective item replaced under the guarantee must be systematically kept by the distributor for a period of 3 months, as of the date of the claim; during this period, ALW may request that the item in question, which has been held at its disposal, be returned for expert appraisal.

ALW reserves the right to invoice items supplied as replacements in the following cases:

- the original defective item is not returned, in spite of ALW's request,
- refusal of guarantee.

When ALW has selected this solution, it undertakes to repair any manual equipment within a period of 15 working days following receipt in its workshops (an acknowledgement of receipt is sufficient proof), failing which ALW will supply an identical new or reconditioned part or piece of equipment.

Round-trip transportation expenses are assumed by ALW in the framework of the guarantee granted to its distributors throughout the world (except for France).

This charter replaces all previous conditions relating to the same subject, for equipment invoiced after the 1st of January 2008. For all other contractual conditions, ALW's general terms and conditions of sale apply.



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Founded in 1902, Air Liquide is the world leader in industrial and medical gases and related services. The company has offices in 75 countries and employs a work force of 40,000. Drawing on constantly renewed technologies, Air Liquide develops groundbreaking solutions used in making countless everyday products and in helping to preserve life.