CITOCUT
Plasma inverter cutting range

Sword edge cutting

www.oerlikon-welding.com
The plasma expert

The plasma process

**Principle**

Plasma cutting can be used on all conductive materials. With this process, compressed air is blown at high speed out of a nozzle; at the same time, an electrical arc is formed through the gas from the nozzle to the surface being cut, turning some of that gas to plasma. The striking of the cutting arc is obtained by a low energy auxiliary arc.

**Performance**

To maximize the service life of the wear parts: electrodes, nozzles and guide shoes, it is important to pay close attention to the conditions for piercing in mid-plate, and also to the main cutting parameters. The correct combination of settings, according to the thickness to be cut - power, nozzle diameter, gas flow rate, separation distance, speed of movement of the torch – yields optimum results in terms of width of cut, lead angle, spatters and smooth cut surface with very little dross.

**Capacity**

Plasma cutting equipment is characterized by the thicknesses that it is capable of:

- Piercing in mid-plate, with minimum risk for nozzles and guide shoes.
- Cutting with satisfactory quality and a comfortable cutting speed.
- Separation cutting at the limits of capacity.

**Plasma gouging**

The plasma gouging process is performed with a standard plasma cutting torch by only changing the nozzle, the skirt and the skate. Using the same principle of plasma cutting it allows metal to be removed in an efficient, precise and clean way.

The benefits of the CITO systems are:

- reduced noise and smoke compared with other thermal gouging methods,
- high metal removal rate (up to 12 kg/hour) with superior precision,
- reduced risk of carbon contamination compared with the arc gouging process,
- possibility to gouge ferrous and non-ferrous metals.

**Drag cutting**

The direct contact between the cutting nozzle and the workpiece provides several benefits in comparison with the “distance cutting” method. This particular position allows most of the smoke, spatters and arc radiation to be kept under the metal sheet thus protecting the operator.

The result of a drag cut is very clean and the resulting kerf is a much more narrow, superior precision quality cut. The drag cutting process is ideal up to 8 mm thickness for all those applications where accuracy is required.
## Selection Table

<table>
<thead>
<tr>
<th>Product name</th>
<th>Main supply</th>
<th>Weight (kg)</th>
<th>Dimensions (mm)</th>
<th>Output current</th>
<th>Duty cycle @ 40°C</th>
<th>Multi voltage</th>
<th>Built-in compressor</th>
<th>PFC</th>
<th>Digital Display</th>
<th>Gouging</th>
<th>Auto. version</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITOCUT 8</td>
<td>1-ph 230 V</td>
<td>8</td>
<td>380 x 150 x 310</td>
<td>10 - 25 A</td>
<td>25 A - 60%</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Inverter</td>
</tr>
<tr>
<td>CITOCUT 8K</td>
<td>1-ph 230 V</td>
<td>16</td>
<td>470 x 205 x 370</td>
<td>10 - 25 A</td>
<td>25 A - 40%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Inverter</td>
</tr>
<tr>
<td>CITOCUT 12MV HPF</td>
<td>1-ph 115/230 V</td>
<td>13</td>
<td>470 x 205 x 370</td>
<td>5 - 30 A</td>
<td>30 A - 35%</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Inverter</td>
</tr>
<tr>
<td>CITOCUT 24C</td>
<td>3-ph 230/400 V</td>
<td>25</td>
<td>435 x 235 x 380</td>
<td>20 - 65 A</td>
<td>65 A - 50%</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Inverter</td>
</tr>
<tr>
<td>CITOCUT 40iC</td>
<td>3-ph 400 V</td>
<td>35</td>
<td>720 x 310 x 430</td>
<td>10 - 120 A</td>
<td>120 A - 60%</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Inverter</td>
</tr>
</tbody>
</table>
CITOCUT 8 & CITOCUT 8K

These equipments are the portable solution for plasma cutting with the possibility to regulate the cutting current up to 25 A and cut up to 8 mm (severance cut on carbon steel).

The CITOCUT 8K is equipped with a built-in-air compressor that allows to cut everywhere with just a 16 A domestic plug. In both equipments, the digital displays of the parameters allow an easy and precise interface to achieve the best results in a simple way.

And all this performance at a minimum weight: the lightest units on the market!

### CITOCUT 8 & CITOCUT 8K

#### Product features
- High tech: microprocessor control and digital display to ease the use of the equipment.
- High quality contact cut: genuine cut up to 8 mm (severance cut on carbon steel).
- Lightweight: easy to transport.
- Reliable and strong: robust design.

#### KEY BENEFITS
- High duty cycle for a maximum efficiency.
- 8 mm quality cutting with only 25 A.
- High operator safety.
- Low air and current consumption.

### Technical characteristics

<table>
<thead>
<tr>
<th></th>
<th>CITOCUT 8</th>
<th>CITOCUT 8K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary input</td>
<td>Single phase input</td>
<td>230 V +/- 10 % - 50-60 Hz</td>
</tr>
<tr>
<td>Effective consumption</td>
<td>11 A</td>
<td>9 A</td>
</tr>
<tr>
<td>Output</td>
<td>Cutting current</td>
<td>10 - 25 A</td>
</tr>
<tr>
<td></td>
<td>Duty cycle at 40 °C</td>
<td>25 A at 60%</td>
</tr>
<tr>
<td>Protection index</td>
<td>IP 23S</td>
<td></td>
</tr>
<tr>
<td>Insulation class</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>Standards</td>
<td>EN 60974-1; EN 60974-7; EN 60974-10</td>
<td></td>
</tr>
<tr>
<td>Dimensions (l x w x h)</td>
<td>380 x 150 x 310 mm</td>
<td>470 x 205 x 370 mm</td>
</tr>
<tr>
<td>Net weight</td>
<td>8 kg</td>
<td>16 kg</td>
</tr>
<tr>
<td>To order</td>
<td>W000401624</td>
<td>W000401627</td>
</tr>
<tr>
<td>Packages including:</td>
<td>a power source CITOCUT 8 or CITOCUT 8K, a torch 4 m, a 4 m earth cable with clamp, a 3 m primary cable</td>
<td></td>
</tr>
</tbody>
</table>

#### CITOCUT 8K: INTEGRATED COMPRESSOR TECHNOLOGY

With the reduction of size and weight for compressors and inverter power sources it is now possible to produce a new generation of plasma units needing only a 16 A power supply to cut. The built-in compressor provides the air for both the plasma and cooling flow and allows cutting of all metals up to 8 mm with a quality cut.

#### Warranty

1 YEAR FREE MOVEMENT ADJUSTMENT

#### Wear Parts Box

Cat n°: W000402268
To be used with the torch PT40-12* (see page 7). The torch is supplied with the equipment!

CITOCUT 12MV HPF

Product features

- Lightweight: 13 kg including the torch.
- Recommended thickness, for the best cutting quality and productivity: 10 mm.
- Maximum cutting thickness: 12 mm.
- Automatic voltage change (115/230 V +15%/-20%).
- Pilot arc operating mode, which gives the possibility to work on painted or coated metals.
- Pilot self-restart, selectable from the panel, to interrupt and automatically reset the arc when cutting screens and grids, increasing operator productivity.
- Nozzle holder protection, as required by standards IEC 60974-7, which eliminates the risk of direct accidental contact with the gas nozzle.

KEY BENEFITS

- Substantial energy savings and wide supply voltage tolerance (+15%/-20%). The power source can also be powered by motor-driven generators of adequate power (min. 6 KVA).
- High operator safety (nozzle holder protection, explosion-proof protection of the air reducer unit).
- High electromagnetic compatibility, allowing the power source to be used close to electronic equipment (such as computers, PLC, etc.).

Main applications

The power source is particularly suitable for cutting the overlapped sheets that are commonly used in the car bodies.

To order

Packages including:
- a power source CITOCUT 12MV HPF, a torch 4 m, a 3 m earth cable with clamp, a 3 m primary cable
- W000401630

WEAR PARTS BOX

Cat n°: W000402269

*C to use only with the nozzle holder shielded: W000402074
CITOCUT 24C and CITOCUT 40iC are the most powerful units of the range based on advanced inverter technology. With a high duty cycle, they are the ideal solution for maintenance operations or intensive applications up to 40 mm thickness. This superior performance and the quick torch connection also allows it to be used for automatic applications and gouging. The digital display provides a precise and repeatable control of the cutting parameters to achieve the maximum quality.

**Technical characteristics**

<table>
<thead>
<tr>
<th></th>
<th>CITOCUT 24C</th>
<th>CITOCUT 40iC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary input</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input voltage 3 phase</td>
<td>230 V - 400 V +/-10% @ 50-60 Hz</td>
<td>400 V +/-10% @ 50-60 Hz</td>
</tr>
<tr>
<td>Max. input current at 400 V</td>
<td>15.5 A</td>
<td>25.2 A</td>
</tr>
<tr>
<td>Max. input current at 230 V</td>
<td>14 A</td>
<td>-</td>
</tr>
<tr>
<td>Cutting current</td>
<td>20 - 65 A</td>
<td>10 - 120 A</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duty cycle at 40 °C 400 V</td>
<td>65 A at 50%</td>
<td>120 A at 60%</td>
</tr>
<tr>
<td>Duty cycle at 40 °C 230 V</td>
<td>50 A at 100%</td>
<td>100 A at 100%</td>
</tr>
<tr>
<td></td>
<td>40 A at 100%</td>
<td>-</td>
</tr>
<tr>
<td>Compressed air</td>
<td>5 bars - 180 l/min</td>
<td>5 bars - 200 l/min</td>
</tr>
<tr>
<td>Protection index</td>
<td>IP 23S</td>
<td></td>
</tr>
<tr>
<td>Insulation class</td>
<td>H</td>
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<td>Dimensions (l x w x h)</td>
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</tr>
<tr>
<td>Net weight</td>
<td>25 kg</td>
<td>35 kg</td>
</tr>
</tbody>
</table>

**To order**

- Packages including: a power source CITOCUT 24C or CITOCUT 40iC, a 3 m earth cable (24C) or a 5 m earth cable (40iC), a 5 m air cable, a 6 m primary cable (24C) or a 5 m primary cable (40iC)  
- W000401633 W000273829  
- Trolley  
- W000372274

**WEAR PARTS BOX**

Cat n°: W000402267

To be used with the torch PT130 (see next page). The torch is not included in the package.

**Product features**

- High quality cut with our patented technology.
- Auto-link function (automatic setting to the net power supply 230 V or 400 V) only for CITOCUT 24C.
- Light, small and powerful: up to 24 mm thickness for CITOCUT 24C, and up to 40 mm thickness for CITOCUT 40iC.
- Gouging possibilities.
- Quick connection torch for easy use.

**KEY BENEFITS**

- Easy to use thanks to the digital display.
- High operator safety.
- Heavy duty cycle for intensive applications.
The torches have been designed to ensure a maximum ergonomics and comfort, as well as precision and robustness. This inevitable tool offers a perfect control of cutting works. The power is in your hands.

### PT40-8
for CITOCUT 8 & CITOCUT 8K

- Handgrip with push button
- O-ring (pack of 5 pcs)
- Torch body (head)
- Electrode
- Diffuser
- Nozzle Ø 0.7
- Nozzle holder
- Nozzle holder shielded
- Torch cable

* Only for models 8 and 8K

### PT40-12
for CITOCUT 12MV HPF

- Handgrip with push button
- O-ring (pack of 5 pcs)
- Torch body (head)
- Electrode
- Diffuser
- Nozzle Ø 0.7
- Nozzle holder
- Nozzle holder shielded
- Torch cable

* Only for model 12MV HPF

### PT130
for CITOCUT 24C and CITOCUT 40iC

- Movable adaptor
- Torch cable
- Handgrip with push button
- O-ring
- Cooling tube
- Torch body (head)
- Electrode
- Diffuser
- Nozzle Ø 0.9
- Nozzle Ø 1.35
- Nozzle Ø 1.5
- Nozzle Ø 1.65
- Nozzle gouging Ø 3.1
- Nozzle holder
- Shield
- Spacing spring
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