INVERTER AIR PLASMA CUTTING MACHINE

HyPLA
INVERTER AIR PLASMA CUTTER

OPERATION MANUAL

DO NOT INSTALL, OPERATE OR MAINTAIN THIS MACHINE WITHOUT READING THIS MANUAL AND PLEASE ALWAYS THINK BEFORE YOU ACT.

www.hyundaiwelding.com
- Usable at any plant by easy to change input voltage 220V, 380V, 440V
- Easy to verify cutting current by digital ammeter during cutting
- Cutting with air only, no need other gas
- Non contact arc starting by pilot circuit
- No need to keep pushing torch switch during cutting by turning AUTO Switch On

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>HyPLA 100</th>
<th>HyPLA 130</th>
<th>HyPLA 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>V</td>
<td>220 / 380 / 440V Switchable Single Phase or Three Phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>Hz</td>
<td>50/60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated Output Current</td>
<td>A</td>
<td>100</td>
<td>130</td>
<td>150</td>
</tr>
<tr>
<td>Input Capacity</td>
<td>KVA</td>
<td>12</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>No Load Voltage @ 380V Input</td>
<td>V</td>
<td>280</td>
<td>280</td>
<td>280</td>
</tr>
<tr>
<td>Output Current Range</td>
<td>A</td>
<td>25 ~ 100</td>
<td>25 ~ 130</td>
<td>50 ~ 150</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>V</td>
<td>110</td>
<td>120</td>
<td>130</td>
</tr>
<tr>
<td>Duty Cycle @ rated output</td>
<td>%</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimension (W×D×H)</td>
<td>mm</td>
<td>365 × 705 × 575</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
<td>51</td>
<td>55</td>
<td>58</td>
</tr>
</tbody>
</table>
General Safe Practices

- Wear approved safety glasses with side shields under your welding helmet or face shield and at all times in the work area.
- When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.
- Do not install or place machine on or over combustible surfaces.
- Be sure that all installation, operation, maintenance and repair procedures are performed only by qualified persons.

Electric shock can kill.

- Wear Dry, hole-free insulating gloves and body protection. Do not touch electrode with bare hand. Do not wear wet or damaged gloves.
- Do not touch live electrical parts.
- Never dip the electrode in water for cooling.
- Properly install and ground all equipment.
- Protect yourself from electric shock by insulating yourself from work and ground.
  Use non-flammable, dry insulating material if possible, or use dry rubber mats, dry wood or plywood, or other dry insulating material big enough to cover your full area of contact with the work or ground, and watch for fire.
- Turn off input power using the disconnect switch at the fuse box before working on the equipment.
- Frequently inspect input power cable for damage or bare wiring and repair or replace cable immediately if damaged.

Fumes and gases can be dangerous.

- Cutting may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. When cutting, keep your head out of the fume. Use enough ventilation and/or exhaust at the arc to keep fumes and gases away from the breathing zone.
- Use enough forced ventilation or local exhaust (forced suction) at the arc to remove the fumes from your breathing area.
- Use a ventilating fan to remove the fumes from the breathing zone and welding area.

Arc rays can burn eyes and skin.

- Use welding helmet with correct shade of filter to protect your eyes from sparks and the rays of the arc.
- Wear welders cap and safety glasses with side shields. Use ear protection when welding out of position or in confined spaces. Button shirt collar.
- Wear complete body protection. Wear oil-free protective clothing such as leather gloves, heavy shirt, cuffless pants and high boots.

Cutting sparks can cause fire or explosion.

- Remove fire hazards from the welding area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Remember that welding sparks and hot materials from welding
can easily go through small cracks and opening to adjacent areas. Avoid welding near hydraulic lines.

- When not use, make certain no part of the electrode circuit is touching the work or ground. Accidental contact can cause overheating and create a fire hazard.
- Do not cut on drums, tanks, or any closed containers unless a qualified person has tested it and declared it or prepared it to be safe.
- Connect the work cable to the work as close to the cutting area as practical. Work cables connected to the building framework or other locations away from the cutting area increase the possibility of the cutting current passing through lifting chains, crane cables or other alternate circuits. This can create fire hazards or overheat lifting chains or cables until they fail.

### INSTALLATION

- **The welding machine shall be installed at a place**;
  - free from the inflamables
  - less humidity, dirt and dust
  - protecting from influence of direct sunlight, wind and rain
  - not generated oil vapor and corrosive gas
  - operating temperature range is from -10°C to 40°C
  - least 30cm away from wall and other welding machine

- **Input Connection (Rear of the machine)**

  Be sure the voltage, phase and frequency of the input power is as specified on the name plate located on the rear panel of the machine.
  - To connect the power cables, turn the power switch OFF
  - Verify the voltage to be supplied from main power.

  - Open the cover of terminal plate and connect the power cable to the power input terminal on the rear of the machine and close the cover of terminal plate.
  - If the input power is single phase, connect two cables on left and right terminal without center.
  - For grounding the machine, connect a ground wire to the ground terminal marked with the symbol located on the rear panel of the machine.
  - Connect the air hose to the air-in of air regulator.

- **Input voltage selection**
  - Verify the connection of voltage selection terminal.
  - If necessary to change it,
    - Remove the cover of input voltage selection plate.
Position the wires for the voltage to be supplied from main power.
For 380V and 440V input, position a switch for the voltage would be used which is inside welder after removing top cover.

**Output Connection (Front of the machine)**
- Connect the work cable (which is connected to the work clamp) to the "+ METAL" terminal.
- To connect the torch,
  - Connect a electrode cable to the "- TORCH" terminal
  - Connect a torch switch connector to the torch switch receptacle
  - Connect a pilot wire to the pilot receptacle.
<table>
<thead>
<tr>
<th></th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power Switch</td>
<td>When it is turned on, the cooling fan and all of electrical circuit inside the machine will be operated.</td>
</tr>
<tr>
<td>2</td>
<td>Power Lamp</td>
<td>It indicates that the machine is on and input voltage is within acceptable range.</td>
</tr>
<tr>
<td>3</td>
<td>Warning Lamp</td>
<td>It indicates the thermal overload or output disabled by any electrical problems or the failure of program. When it is on, the machine will not supply power at the output.</td>
</tr>
<tr>
<td>4</td>
<td>Air Pressure Indicator</td>
<td>It indicates the air pressure.</td>
</tr>
<tr>
<td>5</td>
<td>Ammeter</td>
<td>It indicates the cutting current.</td>
</tr>
<tr>
<td>6</td>
<td>Current Adjust Volume</td>
<td>Adjust the current.</td>
</tr>
<tr>
<td>7</td>
<td>Pilot Switch</td>
<td>Possible the non contact cutting with workpiece by pilot circuit.</td>
</tr>
<tr>
<td>8</td>
<td>Auto Switch</td>
<td>If it is On, no need keeping to push torch switch during cutting.</td>
</tr>
<tr>
<td>9</td>
<td>Air Check Switch</td>
<td>It is for checking the flow of the air. If this switch is ON, then the air is flowed by opening the solenoid valve inside the machine.</td>
</tr>
<tr>
<td>10</td>
<td>Control Fuse</td>
<td>It will be broken by any electrical problems</td>
</tr>
</tbody>
</table>
START UP

1. Turn On the main power supplied to machine
2. Turn On the power switch of machine and then verify that the power lamp is On and the cooling fan is running
3. Regulate the air pressure to 75PSI using the lever of air regulator when air check switch is ON
4. Select PILOT ON or OFF of the pilot selection switch
5. Select AUTO ON or OFF of the auto selection switch
6. Set the proper cutting current by the output current adjusting volume
7. Start cutting
Thanks for purchasing our machine

Please fill out below form for future reference. This information can be found on the Nameplate of your machine.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>INVERTER AIR PLASMA CUTTING MACHINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number</td>
<td></td>
</tr>
<tr>
<td>Date Manufactured</td>
<td></td>
</tr>
<tr>
<td>Serial Number</td>
<td></td>
</tr>
<tr>
<td>Date Purchased</td>
<td></td>
</tr>
<tr>
<td>Where Purchased</td>
<td></td>
</tr>
<tr>
<td>Where you use</td>
<td></td>
</tr>
</tbody>
</table>

Whenever you request replacement parts or information on this machine, always supply the information you have recorded above. The date number is especially important when identifying the correct replacement parts.

Complete this form, please fax it to our selling agency in your country or us for warranty statement.

HYUNDAI WELDING CO., LTD.

HEAD OFFICE : ILSONG B/D, 15, 16TH FLOOR #157-37, SAMSUNG-DONG, GANGNAM-GU, SEOUL, KOREA
TEL : (+82-2)6230-6051~68, 76~81 / Fax : (+82-2)522-2030

ICHEON FACTORY : #9-2, SAUM-DONG, ICHEON, GYEONGGI-DO, KOREA
TEL : (+82-31)636-3100 / FAX : (+82-31)636-3957

www.hyundaiwelding.com