GANTRY TYPE CNC PLASMA CUTTING MACHINE
MODEL: GSII-4000

### TECHNICAL DETAILS:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>GSII-4000+PMX105</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MACHINE BODY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Frame</td>
<td>Medium Gantry</td>
<td></td>
</tr>
<tr>
<td>Machine Size (mm)</td>
<td>4000*14000mm</td>
<td></td>
</tr>
<tr>
<td>Effective Cutting Area (mm)</td>
<td>3200*12000mm</td>
<td></td>
</tr>
<tr>
<td>Optional Size:</td>
<td>Available</td>
<td></td>
</tr>
<tr>
<td>Max. Travelling Speed (mm/min)</td>
<td>12000mm/min</td>
<td></td>
</tr>
<tr>
<td>Cutting torch lifting distance</td>
<td>170mm</td>
<td></td>
</tr>
<tr>
<td>Longitudinal position accuracy</td>
<td>± 0.2 mm/1000mm</td>
<td></td>
</tr>
<tr>
<td>Longitudinal Repeatability</td>
<td>± 0.2 mm/1000mm</td>
<td></td>
</tr>
<tr>
<td>Speed setting error</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>THC accuracy</td>
<td>±0.2mm</td>
<td></td>
</tr>
<tr>
<td><strong>CUTTING TORCH</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxy-fuel cutting torch station number</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Oxy-fuel cutting torch number</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Oxy-fuel cutting thickness</td>
<td>6-150mm by 1 flame torch</td>
<td></td>
</tr>
<tr>
<td>Oxy-fuel Torch height sensor</td>
<td>Yes, with capacitor sensor THC</td>
<td></td>
</tr>
<tr>
<td>Oxy-fuel Torch Ignition system</td>
<td>Yes, Supplied with</td>
<td></td>
</tr>
<tr>
<td>Plasma cutting torch number</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Plasma Torch height sensor</td>
<td>HUGONG brand ARC voltage THC</td>
<td></td>
</tr>
<tr>
<td>Plasma Torch Anti-collision</td>
<td>Yes, Supplied with</td>
<td></td>
</tr>
<tr>
<td>Plasma dross free thickness</td>
<td>14mm</td>
<td></td>
</tr>
<tr>
<td>Plasma Piercing thickness from middle</td>
<td>22mm</td>
<td></td>
</tr>
<tr>
<td>Plasma cutting from edge thickness</td>
<td>38mm</td>
<td></td>
</tr>
<tr>
<td>Plasma Cutting Speed</td>
<td>105A 12mm 2060mm/min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>105A 20mm 940mm/min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>105A 32mm 370mm/min</td>
<td></td>
</tr>
</tbody>
</table>
PLASMA UNIT

<table>
<thead>
<tr>
<th>Model</th>
<th>POWERMAX105</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>AIR-AIR(Plasma by Air and Shield by Air)</td>
</tr>
</tbody>
</table>
| Material         | Mild Steel: Good Quality  
Stainless Steel: Good Quality |
| Country of Origin| American    |
| Max output current| 105A        |
| Power            | 380V, 3 Phase, 50Hz |
| Duty Cycle       | 80% @ 105A, 380 V, 3-PH |

DRIVE

<table>
<thead>
<tr>
<th>Drive Model</th>
<th>Dual Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Servo Motor System</td>
<td>PANASONIC</td>
</tr>
<tr>
<td>Gear Box</td>
<td>Germany Neugart</td>
</tr>
<tr>
<td>Rails</td>
<td>24Kg on Y</td>
</tr>
</tbody>
</table>

CONTROLLER & SOFTWARE

<table>
<thead>
<tr>
<th>CNC Control System</th>
<th>Hugong HG613</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nest Software</td>
<td>FastCam Pro</td>
</tr>
</tbody>
</table>

ELECTRICAL COMPONENT

<table>
<thead>
<tr>
<th>PLC &amp; Electrical Components</th>
<th>Delta Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stabilizer</td>
<td>Supplied with</td>
</tr>
<tr>
<td>Power Voltage</td>
<td>220V, 1 Phase, 50 Hz</td>
</tr>
</tbody>
</table>

CNC CUTTING ACCURACY DESCRIPTION

1. Speed difference to pre-set Unit 0
2. lengthwise accuracy mm $\leq 0.2\text{mm/1000mm}$
3. 4 sides accuracy mm $\leq 0.5\text{mm/1000mm}$
4. Diagonals accuracy mm $\leq 0.5\text{mm/1000mm}$
5. Repeating accuracy mm $\leq 0.2\text{mm/1000mm}$
6. Crossover point mm $\leq 0.2\text{mm/1000mm}$
7. turning back to start point mm $\leq 0.2\text{mm/1000mm}$

PROGRAMMING AND NESTING SOFTWARE (FASTCAM)

FastCAM is powerful CADD Plotting Software
Specially used for number control cutting and it can
Read CAD DXF files and chooses and output the NC
Files of different controllers; In addition, it can do speed
cutting obviously, heighten cutting quality and thus
improve the social and economic benefits.
Powermax125®

The Powermax105 delivers superior cut capabilities on 19mm thick metals. It has the duty cycle and industrial performance necessary for tough cutting and gouging jobs. The Powermax system uses plasma to melt metal, and compressed air or nitrogen to blow the molten metal away. This leaves a good quality cut edge ready to weld in most cases.

Smart Sense™ technology automatically adjusts the gas pressure according to cutting mode and torch lead length. It also detects electrode end-of-life, automatically turning off power to the torch to prevent potential damage to other parts or to the work piece.

**OPERATING A PLASMA SYSTEM REQUIRES:**
- AC Power Source (Fixed or Generator)
- Compressed Air, Shop Air, Portable Air Compressor or Bottled Air
- Compressed Air Filter

**Relative cut performance on mild steel**

- 340% faster on 12 mm (1/2")
- 20 mm (3/4")
- 32 mm (1-1/4")

**FastCAM**
- Drawing Function
- CAD Optimizing Function
- Multiply cutting special Function

**FastNEST**
- Interactive Nesting Function
- Common Cutting Continuous Cutting
- Nesting Cutting for Remainder

**FastPATH**
- Automatically set cutting path
- Set various of cutting technology
- Support successive process technology

**FastPLOT**
- Analog checking function
- Cost accounting function
- Code conversion function
HUGONG STANDARD THC

- Power supply: AC24±5%
- Lift motor: DC24V DC Motor
- Drive motor: PWM
- Output current: 1A-4A
- Working temperature: -10-60℃
- Divided voltage ratio: 100:1
- Accuracy: ±1V±5
- Running transfer: alternative ARC transfer and pierce transfer
- Outer dimension: 310*270*95mm

PLASMA TORCH ANTI-COLLISION SENSOR THC

SERVO MOTOR: TO WORK WITH GEAR BOX AS AN ASSEMBLY
- Japan brand product
- Panasonic brand, AC servo motor is used for movement driving.
- AC 450W

GEAR BOX: TO WORK WITH SERVO MOTOR AS AN ASSEMBLY
- Germany famous brand
- Rotation ratio: 40:1
- Minimum constant working life: 20,000.00 hours
- Speed: 30,000r/min
- 10 years without problem, no need for maintenance

FLAME CUTTING ASSEMBLIES:

- Flame cutting torch
- Flash arrestor
- Automatic ignition device
- Capacitor THC Cable

THC FUNCTION
1. 1 set of oxy-fuel torch: AMERICAN BRAND GENTEC TORCH

2. Automatic capacitor THC
   - Power supply: AC24V±10%, 5A
   - Sensing height: 2-30mm, 15mm is best
   - Accuracy: ±0.2mm
   - Motor: DC motor
   - THC Working temperature: -10-60ºC
   - Sensor head working temperature: -10-200ºC
   - IP 64: dust proof
   - IP16 industrial Terminal, 4 core and 6 core

3. 3 sets of gas hose are installed:
   - 1 set of Cutting oxygen hose,
   - 1 set of preheating oxygen hose,
   - 1 set of fuel gas hose

4. 1 set of Auto-ignition:
   - It consists of ignition torch, ignition signal cable, fuel gas hose and bracket.
   - Operator controls ignition by pushing button on controller panel.
   - Maximum Space from ignition torch to Gentec torch is 100mm.

5. Flash arrestor to prevent burning back.
   - For operator and equipment safety

HG613 CONTROLLER:
   - A fashionable and separated cabinet
   - Cabinet carries HG613 controller and Electrical parts.
   - 15 inch, 1024*768, high definition 16 million colors and high brightness LCD
   - 64M SDRAM
   - available for user: 256M or 1G electronic hard disk
   - USB: USB 1.1 front interface
   - full-steel structure which defends electromagnetic radiation, interference and static electricity.
   - Parameters backup and online upgrade.
   - Chinese/English file system and menu, and the menu can be switched only by one key.
   - 45 categories different graphics(including grid pattern), chip part and hole part are alternative.
   - Support the EIA code (G code) and various FastCAM, FreeNest, SmartNest, IBESoftwares.
   - Compact keyboard design and easy to input files.
   - Graphics have some operations such as Proportion, Rotate, Mirror.
   - Graphics can be arrayed in matrix, interaction, stacked modes
   - All input and output port type and the number can be customized (normally open or normally closed)
   - Provide a front USB interface for copying files.