



***THE BEST PROVIDER OF MACHINERY  
AND PARTS FOR LASER WELDING, CUTTING,  
AND ENGRAVING NEEDS***

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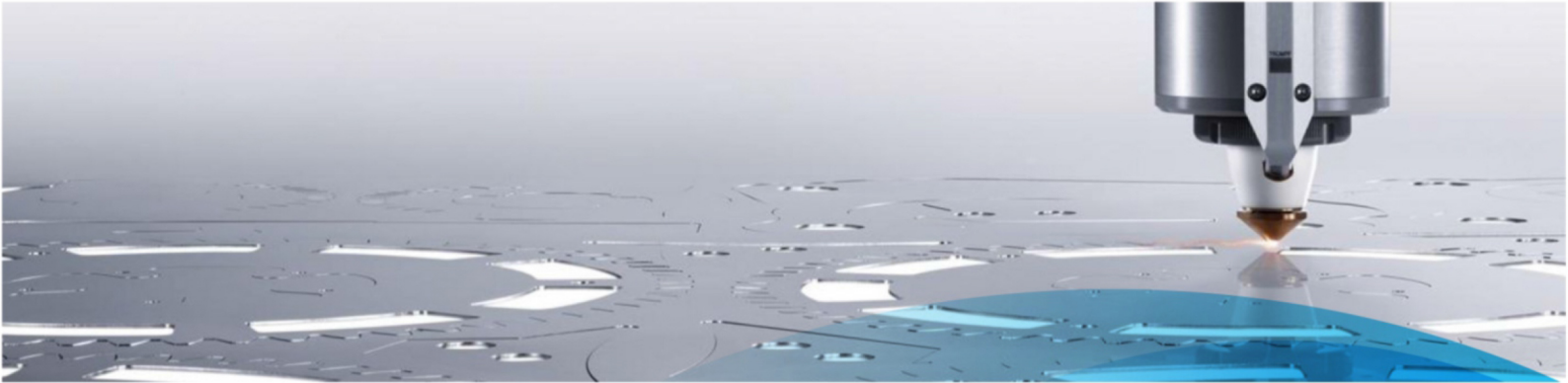
***PT. MAXIMA GLOBAL MULTITEKNIK***  
*COMPANY PROFILE*

[www.maximaglobalmultiteknik.com](http://www.maximaglobalmultiteknik.com)

# INTRODUCE

MAXIMA GLOBAL MULTI TEKNIK

*Penyedia mesin dan suku cadang untuk kebutuhan laser pengelasan, pemotongan, dan grafir terbaik yang hanya dapat dicapai melalui komitmen PT. Maxima Global Multiteknik, dengan dukungan seluruh mitra perusahaan dan penerapan manajemen teknologi efektif dan efisien.*



*PT. MGM (PT. Maxima Global Multiteknik) yang telah lebih dari 12 tahun berpengalaman pada bidang laser terus tumbuh dan berkembang sesuai dengan rencana strategis perusahaan. Banyak pengalaman dan proses pembelajaran yang telah dilewati dari tahun ke tahun yang untuk membuat perusahaan lebih maju dan tetap berkomitmen melayani kebutuhan pelanggan.*

*Kepercayaan yang diberikan dari berbagai pihak (pemerintah, swasta, maupun perorangan) telah membuat PT. MGM (PT. Maxima Global Multiteknik) menjadi perusahaan penyedia mesin dan suku cadang peralatan laser tersebar di berbagai sektor seperti pada bidang IT (elektronik komponen dan elektronik konsumen), packaging (rokok, medis, minuman dan makanan), auto part (komponen otomotif dan Interior otomotif), hardware (peralatan dan metal part), dan gift accessory (crystal, tekstil, kulit, dan perhiasan).*

*Komitmen PT. MGM (PT. Maxima Global Multiteknik) untuk menyediakan kebutuhan mesin dan suku cadang laser untuk konsumen yang tidak terlepas dari peran setiap anggota P T . MGM dalam melakukan perbaikan, perawatan, dan kegiatan kunjungan ke konsumen dengan berbagai manajemen dan keahlian pada bidang laser yang efektif, efisien, serta memperhatikan standar K3 (Keselamatan Kesehatan Kerja) dan lingkungan kerja.*

*Kiprah PT. MGM (PT. Maxima Global Multiteknik) dalam keunggulan mesin dan perbaikan mesin - mesin laser tidak akan berjalan dengan baik tanpa adanya dukungan dan kerja sama yang baik dengan seluruh mitra kerja perusahaan (penyuplai, pihak perbankan, dan SDM yang memiliki kompetensi tinggi).*

*Sebagai wujud dari rangkaian proses pembelajaran dan pengalaman perusahaan melalui manajemen teknologi dan keunggulan mesin, maka kami siap untuk memenuhi kebutuhan mesin laser dan memberikan pelayanan yang terbaik.*



## 1. System Image

# MAX UV 3/5/7/10



(1) Split type laser marker. This type of laser marker is applicable to the cases in which the marker is required to be embedded into customer's production line or equipment.



(2) Standard integrative laser marker. The laser marker is a standalone machine.

(3) Laser marker with safety cover and rotating table. It is applicable to the cases in which the customer has a high requirement on laser protection, for example, green laser marker and UV laser marker, etc. In this case, the laser marker is also a standalone machine. Production efficiency of this type is relatively low because the operator has to open/close the safety door when loading/unloading workpieces.

## **2. Introduction**

MAX UV 3/5/7/10 Laser Marker is a high-tech product integrating laser technology, optics, fine machine and electronic technology and computer science. It adopt signal worktable. This machine can be used to produce various symbols or markings on a surface of products, is capable of marking or engraving all suitable surfaces, including various metallic products (such as steel, aluminium, iron, copper, etc.) and most of non-metallic material (such as plastics, ABS, ceramics and so on).

## **3. System characters**

MAX UV 3/5/7/10 Laser Marker is developed based on 355nm ultraviolet laser. The laser has independent intellectual property. 355nm ultraviolet laser can achieve tiny focuses point and it almost has no HAZ(heat affect zone), so it is mainly used for super precision marking, special material marking and engraving.

- z Wider material suitable
- z Excellent beam quality
- z Small HAZ prevents material from damaging
- z High marking speed, high efficiency and super precision
- z Low cost of ownership
- z Long lifetime



## 4. Technical specification

Machine model	unit	MX UV 3/5/7/10 W-JPT	MX UV 3/5/7/10 W-Huaray
Laser power	W	3/5/7/10 W	
Wavelength	nm	355nm	
Pulse Duration	KHZ	<15 ns @ 60 kHz	<15 ns @ 50 kHz
Frequency	KHZ	40kHz-300kHz	50 kHz ~ 200 kHz
Beam quality (M <sup>2</sup> )		M <sup>2</sup> ≤1.2	
Beam Circularity		>90%	
Beam Diameter		0.45±0.15mm	4 ±0.5 mm, 1/e <sup>2</sup>
Pulse-to-Pulse Stability		RMS≤3%	
Cooling way		Water cooling	

## 5. System configuration

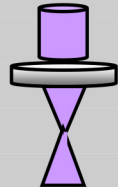

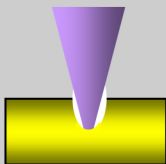
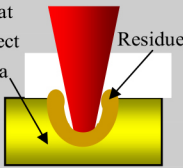
Component	Quantity	Manufacturer
Scanner	1	Shinno
Laser generator	1	JPT - HUARAY
Expander	1	Shinno
IPC	1	China
Cooling system	1	Air Cooling
EMCC controller	1	Ezcard
Marking software	1	Maxima
Worktable	1	Maxima

\*Note: As products continue to update, please contact us for latest configuration.

## 6. Requirement of the working condition

- Ambient temperature 20-28°C, air-conditioner needed.
- Humidity <60%; No dew; dehumidifier installation needed.
- Power supply : 220V; 50Hz
- Electric Power net undulation:  $\pm 15\%$ ; Power net suited to the international standard. Area with voltage amplitude above 15% should have automatic digital voltage stabilization and steady flow system installed.
- No strong electromagnetism signal interference around the equipment installed. No wireless injection station (or relay station) around.
- Groundsill swill: less than 50 $\mu\text{m}$  Vibration acceleration: less than 0.05g. Avoid too many punches and other machine tool equipments setting around.
- No smoke and dust in the equipment space, avoid operational environment with much dust such as metal polishing and rubbing.
- Air pressure: 86-106kpa
- In certain environment, anti-static floor, strengthen shield and the other equipments should be installed.
- Strict quality requirement of the circulating water for cooling use. Pure water, deionized water or distilled water are preferred, water contains much metallic ion and other minerals such as tap water, mineral water should not be used.

## 7. The comparison between UV and Infrared laser series

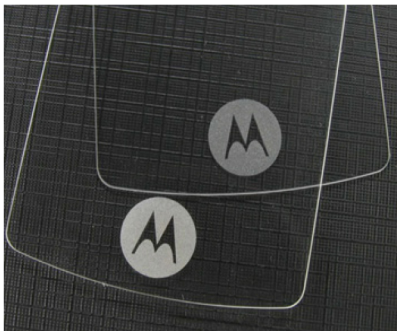
Laser type		UV laser	Infrared laser
Parameter comparison			
Laser performance parameter comparison	Wavelength	Short (266nm,355nm)	Long (1064nm,10640nm)
	Pulse width	Narrow (10-50ns)	Broad (30-150ns)
	Single photon energy	Big (3-6eV)	Small (<1eV)
	Focusing facula	Small (5 $\mu$ m) 	Big (>12 $\mu$ m) 
	Laser beam quality	Good (M2 is 1-3)	Commonly (M2 is 2-20)
Processing procedure comparison	Processing theory	Due to high energy of single photon, the UV laser can break the chemical bond of molecular directly to produce corrosion( cold working)	Due to small energy of single photon, the infrared laser oscillate the molecular of material to generate heat effect, so the material dissolves first and then volatilizes to produce notch. (hot working)
	Processing materials range	Almost all materials can absorb UV light, wide range of processing materials	Some material can not absorb infrared light, hence the processing materials are relatively restricted
Processing result parameter comparison	Processing line width	Narrow (10 $\mu$ m)	Broad (>20 $\mu$ m)
	Heat effect area	Narrow UV laser 	Broad Infrared laser Heat effect area Residue 
Processing character comparison		Fine requirement process Process that other wave band laser can not be used	Common process



## 8. Application

- HDPE marking
- Food and medicine packing material (aluminium film etc.) marking and drilling (Can drill tiny hole less than 10um)
- Soft PCB marking and slicing
- Thin film removal
- Silicon wafer tiny hole and dead hole processing.

### Sample Pictures



# **PT. MAXIMA GLOBAL MULTITEKNIK**

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