Productivity Enhancements

Dedicated to the advancement of laser systems, Universal's patented technology improves the user's experience and makes material processing more effective and productive. The following innovations are exclusive solutions offered by Universal Laser Systems.

1-TOUCH LASER PHOTO™
1-Touch Laser Photo is an exclusive software application optimizing any photograph for laser engraving onto a material. The software applies special filters to the image and adjusts the contrast and definition appropriately for the material being processed. Using the software is as simple as selecting your target material and cropping, resizing, rotating or mirroring the image.

CLASS 4 CONVERSION MODULE FOR PASS-THROUGH*
When used in conjunction with an approved work environment, Universal's large-format ILS and XLS laser system platforms can be configured to process materials of unlimited length in full compliance with Class IV laser safety regulations.

DUAL LASER CONFIGURATION*
A Dual Laser system combines the beams from two lasers into a single beam. This maximizes cutting, engraving and marking power. Using a patented technology, the system configuration eliminates polarization effects and delivers beam quality superior to that of a single laser.

LASER SYSTEM USER INTERFACES
The Universal Control Panel (UCP) and the Laser System Manager (LSM) enable expert results with very little training. Both include a Printer Driver and Direct Import Feature* for uploading graphic designs. The ULS Intelligent Materials Database automatically selects optimized processing settings for hundreds of materials, while still allowing for manual override control by the user. Users can easily duplicate graphics and features for production of multiple pieces. An Estimator feature provides accurate calculation of processing times for every laser material processing job.

MULTI-WAVELENGTH TECHNOLOGY*
Universal's Multi-wavelength technology is designed to support three different types of wavelengths to process the broadest possible spectrum of materials: 10.6 μm, 9.3 μm and 1.06 μm.

MULTIWAVE HYBRID™ TECHNOLOGY*
MultiWave Hybrid technology allows three different laser wavelengths to be run simultaneously on a single laser system using specially designed optics. This exclusive, patented technology provides users more material processing flexibility for a variety of materials which would not process well with a single wavelength.

RAPID RECONFIGURATION™
10.6 μm CO_2 lasers are available for laser systems in either single or multiple laser configuration. The lasers in the system can be individually or simultaneously controlled, quickly delivering a wide power range from 10 to 150 watts. Also available are 9.3 μm CO_2 and 1.06 μm Fiber lasers. Rapid Reconfiguration allows users to very simply install and reinstall any ULS laser source onto any ULS laser system, without the need of a technician or tools.

SUPERSPEED™*
ULS patented SuperSpeed™ technology offers customers the unique ability to drastically improve laser system productivity in laser engraving and marking by providing the fastest throughput in the industry. It requires dual lasers and our exclusive optics which creates two, parallel beams that are slightly offset. Each beam is controlled independently in order to produce two raster scan lines simultaneously. In vector mode, the two beams are automatically combined to provide higher cutting power.

Learn more at www.anp.com.hk

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PRODUCT GUIDE

Complete Portfolio of DLMP™
(Digital Laser Material Processing) Technology Solutions

UNIVERSAL® LASER SYSTEMS
A & P INSTRUMENT® 科 藝 儀 器

	VLS2.30	VLS3.50	VLS3.60	VLS4.60	VLS6.60	PLS4.75	PLS6.75	PLS6.150D	PLS6.150D w/ SuperSpeed™	PLS6MW	ILS9.75	ILS12.75	XLS10.150D	XLS10MWH
Processing Area	16 x 12 in *(406 x 305 mm)*	24 x 12 in *(610 x 305 mm)*	24 x 12 in *(610 x 305 mm)*	24 x 18 in *(610 x 457 mm)*	32 x 18 in *(813 x 457 mm)*	24 x 18 in *(610 x 457 mm)*	32 x 18 in *(813 x 457 mm)*	32 x 18 in *(813 x 457 mm)*	32 x 18 in *(813 x 457 mm)*	32 x 18 in *(813 x 457 mm)*	36 x 24 in *(914 x 610 mm)*	48 x 24 in *(1219 x 610 mm)*	40 x 24 in *(1016 x 610 mm)*	
Maximum Part Size	18.75 x 14.6 x 4 in *(476 x 370 x 102 mm)*	26.75 x 14.6 x 4 in *(679 x 370 x 102 mm)*	29 x 17 x 9 in *(737 x 432 x 229 mm)*	29 x 23 x 9 in *(737 x 584 x 229 mm)*	37 x 23 x 9 in *(940 x 584 x 229 mm)*	29 x 23 x 9 in *(737 x 584 x 229 mm)*	37 x 23 x 9 in *(940 x 584 x 229 mm)*	37 x 23 x 9 in *(940 x 584 x 229 mm)*	37 x 23 x 9 in *(940 x 584 x 229 mm)*	37 x 23 x 9 in *(940 x 584 x 229 mm)*	40.5 x 30 x 12 in *(1029 x 762 x 305 mm)*	52.5 x 30 x 12 in *(1334 x 762 x 305 mm)*	61 x 33 x 12 in *(1550 x 838 x 305 mm)*	
Dimensions	26 x 14 x 25 in *(661 x 356 x 635 mm)*	34 x 14 x 25 in *(661 x 356 x 635 mm)*	36 x 38 x 30 in *(914 x 965 x 762 mm)*	36 x 39 x 36 in *(914 x 991 x 914 mm)*	44 x 39 x 36 in *(1118 x 991 x 914 mm)*	36 x 39 x 36 in *(914 x 991 x 914 mm)*	44 x 39 x 36 in *(1118 x 991 x 914 mm)*	44 x 39 x 36 in *(1118 x 991 x 914 mm)*	44 x 39 x 36 in *(1118 x 991 x 914 mm)*	44 x 39 x 36 in *(1118 x 991 x 914 mm)*	57 x 44 x 46 in *(1448 x 1118 x 1168 mm)*	69 x 44 x 46 in *(1753 x 1118 x 1168 mm)*	69.2 x 61 x 55.5 in *(1758 x 1550 x 1410 mm)*	
Available Focus Lenses	1.5 / 2.0 / HPDFO™		1.5 / 2.0 / 2.5 / 4.0 / HPDFO™					1.5 / 2.0 / 2.5 / 4.0 / HPDFO™		2.0 MW / 4.0 MW / HPDFO™ MW	2.0 / 3.0 / HPDFO™		2.0 / 3.0 / HPDFO™	2.0 MWH / 3.0 MWH
Operating System Compatibility	Requires a dedicated PC to operate. Compatible with all Windows OS, 7.0 and higher							Requires a dedicated PC to operate. Compatible with all Windows OS, 7.0 and higher						
PC Connection	USB 2.0 or higher							USB 2.0 or higher						
Laser Options	**10.6 µm –** 10, 25, 30 W **9.3 µm** – 30 W	**10.6 µm –** 10, 25, 30, 40, 50 W **9.3 µm –** 30, 50 W	**10.6 µm** –10, 25, 30, 40, 50, 60 W **9.3 µm** – 30, 50 W			**10.6 µm** – 10, 25, 30, 40, 50, 60, 75 W **9.3 µm** – 30, 50, 75 W		**10.6 µm –** 10, 25, 30, 40, 50, 60, 75 W **9.3 µm** – 30, 50, 75 W May equip with dual lasers for up to 150 W		**1.06 µm (Fiber) –** 40, 50 W **10.6 µm** – 10, 25, 30, 40, 50, 60, 75 W **9.3 µm** – 30, 50, 75 W	**10.6 µm –** 10, 25, 30, 40, 50, 60, 75 W **9.3 µm** – 30, 50, 75 W May equip with dual lasers for up to 150 W		**10.6 µm** – 10, 25, 30, 40, 50, 60, 75, 250 W **9.3 µm** – 30, 50, 75 W May equip with dual lasers for up to 150 W	(1) Fiber laser and up to (2) CO_2 lasers: **1.06 µm (Fiber) –** 40, 50 W **10.6 µm –** 10 to 250 W **9.3 µm –** 30, 50, 75 W
Approximate Weight	70 lbs *(32 kg)*	95 lbs *(43 kg)*	235 lbs *(107 kg)*	270 lbs *(122 kg)*	325 lbs *(147 kg)*	270 lbs *(122 kg)*	325 lbs *(147 kg)*	345 lbs *(156 kg)*		325 lbs *(147 kg)*	400 lbs *(181 kg)*	430 lbs *(195 kg)*	850 lbs *(386 Kg)*	
Power Requirements	110V/10A; 220V-240V/5A							220V-240V/15A		110V/10A; 220V-240V/5A	220V-240V/10A *(1 laser)* 220-240V/16A *(2 lasers)*		220V-240V/30A	
Exhaust Connection	One 3 in (76 mm) port 150 CFM @ 6 in static pressure *(255 m^3/hr at 1.5 kPa)*	One 3 in (76 mm) port 250 CFM @ 6 in static pressure *(425 m^3/hr at 1.5 kPa)*	One 4 in (102 mm) port 250 CFM @ 6 in static pressure *(425 m^3/hr at 1.5 kPa)*	Two 4 in (102 mm) ports 500 CFM @ 6 in static pressure *(850 m^3/hr at 1.5 kPa)*	One 4 in (102 mm) port 250 CFM @ 6 in static pressure *(425 m^3/hr at 1.5 kPa)*	Two 4 in (102 mm) ports 500 CFM @ 6 in static pressure *(850 m^3/hr at 1.5 kPa)*	Two 4 in (102 mm) ports 500 CFM @ 6 in static pressure *(850 m^3/hr at 1.5 kPa)*				Two 4 in *(102 mm)* ports 700 CFM @ 6 in static pressure *(1190 m^3/hr at 1.5 kPa)*	Two 4 in *(102 mm)* ports 1000 CFM @ 6 in static pressure *(1700 m^3/hr at 1.5 kPa)*	One 6 in *(152 mm)* port 700 CFM @ 6 in static pressure *(1190 m^3/hr at 1.5kPa)*	

Optional Accessories

AUTOMATION INTERFACE
An option enabling connection to an automation device such as a computer or PLC. It allows the laser system to be integrated into an automated manufacturing cell.

COLLIMATOR
Also known as a beam expander, this option expands and collimates the beam to minimize divergence. It provides an unchanging focal spot across the engraving field for more consistent material processing. The result is more consistent material processing. It is required for High Power Density Focusing Optics.

CONFIGURABLE CUTTING TABLE
Allows the operator to insert specially designed material-support pins into an aluminum plate with an array of precision holes designed to fully support any material and provide the laser a clear cutting path. This table decreases the amount of laser energy reflected back into the material and reduces certain scorch marks and other defects which may result on sensitive materials.

COMPUTER-CONTROLLED AIR CLEANER CART*
This filtration device removes smoke and fumes when external venting is not possible. The cart is controlled through a USB port and automatically powers on/off when processing an application.

COMPUTER-CONTROLLED COMPRESSED AIR UNIT
This unit provides a clean, water and oil-free source of optical quality compressed air for use in air-assisted laser material processing applications. It also supplies air for optics protection.

DUAL HEAD*
This accessory adds a second carriage to the motion system. This accessory can simultaneously engrave or cut two copies of an image or pattern, increasing productivity for repetitive images or cutting patterns

FLOW-THROUGH CUTTING TABLE
The Flow-through Cutting Table consists of a thin-wall aluminum honeycomb-core evenly supported by an underlying hollow structure. It is designed to maximize air-flow through the work piece during laser cutting and reduce the risk of damage to the bottom surface of the material.

GAS ASSIST WITH OPTICS PROTECTION
Gas Assist injects a stream of gases (air, nitrogen, hydrogen, oxygen, etc.) onto the material being processed at the processing point. This keeps the material clear of debris, prevents or promotes certain chemical reactions, and removes bulk material. The gases can be supplied either by an air compressor or from external gas tanks. Optics protection supplies a constant stream of clean, compressed gas to prevent the dust and debris generated during processing from contaminating the optical surfaces.

HPDFO™ (HIGH POWER DENSITY FOCUSING OPTICS)
The HPDFO option delivers the smallest laser spot size available for CO_2 and Fiber lasers. This enables very finely detailed marking and engraving and is also viable for cutting on CO_2 systems. The small spot size concentrates the laser beam to allow a CO_2 laser process to mark directly on steel, stainless steel and titanium without the need for metal marking compound.

ROTARY FIXTURE
This fixture improves the ease of cutting, engraving or marking on cylindrical items. It's designed with holding attachments to clamp and rotate cylindrical and conical objects 360 degrees for laser processing.

TRAVELING EXHAUST*
This patented exhaust system is connected to the motion arm and collects smoke and debris at the laser path. It prevents contaminates from inside of the laser system from falling back on the surface of the material, which can obstruct the laser beam.

UAC 2000 & 4000 FILTRATION*
The ULS family of air filtration systems contains patented technology to safely remove particulates (smoke) and volatile organic compounds or VOCs (fumes) resulting from laser processing. Both solutions use a four-stage filtration system (Pre-Filter, HEPA Filter and Dual Carbon Filters) to effectively remove these byproducts from the exhaust air. Sensors monitor each stage and alert the user when filter media needs replacing.

UNIVERSAL CAMERA REGISTRATION (UCR)
A camera is mounted inside the laser system to improve cutting accuracy on printed materials. The software locates registration marks and adjusts the predefined cut path to fit the material. Material is placed close to the correct position on the laser system, and the UCR automatically adjusts the cut path to fit the material placement.

**Options compatibility may vary based on laser platform*

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