

## LASER CUTTING 3D PARTS WITH



DRS Robotic Laser Cells use leading industry components.



DRS is an authorized integrator of Fanuc Robots.

### Dynamic Robotic Solutions, Auburn Hills, MI

has developed unique solutions for processing 3D parts for automotive, appliance, recreational vehicle, and other industrial applications. Utilizing a variety of laser technologies, beam delivery components and processing heads from Laser Mechanisms and Fanuc Robots, precision cutting of metal or non-metal parts can be achieved in production environments.


Dynamic Robotic Solutions (DRS), formerly known as KMT Robotic Solutions, is also a global leader in robotic water jet, router and knife trimming systems for trimming and cutting of metal, plastic, fiberglass or composite materials.

DRS has more than 1500 systems and over 3,700 robots installed around the world. With more than 30 years experience developing, designing, building, servicing and supporting robotic automation solutions for manufacturing customers, DRS is strategically positioned to serve the global market through offices in the U.S. and Europe, and representatives in Asia and other major markets. DRS has successfully installed robotic cells using Rofin UK CO<sub>2</sub> lasers, and now plans to also take advantage of the ultra compact, light weight Iradion models. **continued page 3**

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## IRADION & rofin-sinar Form Global Alliance

Iradion and rofin-sinar  have formed a global alliance that will offer customers an impressive portfolio of sealed CO<sub>2</sub> lasers. Advanced technology models are available with power levels from 30 to 650 watts in 10.6, 10.2 and 9.3 micron wavelengths.

Iradion lasers utilize a patented ceramic core design that provides superior power stability, longevity, compact design and the most competitive pricing in the industry. Rofin UK lasers utilize unique design and construction features that customers acknowledge provide exceptional results. **continued page 4**



Iradion lasers utilize a patented ceramic core design. The 1625 250 watt laser offers superior performance in a small package.

### Special points of interest:

- Iradion Ceramic Core CO<sub>2</sub> Lasers
- Rofin UK CO<sub>2</sub> Lasers
- DRS Robotic Laser Cell Applications
- Advanced Lasers Inc Cutting Machines
- FANUC M20iA Robot
- Laser Mechanisms Beam Delivery

### ADVANCED LASERS, INC. ... "A NEW STYLE OF CUTTING"



*The Advanced Lasers, Inc. Stilus® cutting machine features the Iradion 1625 Laser, linear drives and patented CAD/CAM software.*

**Advanced Lasers, Inc.**, founded by Francesco Buzzigoli, is introducing one of the most advanced industrial laser cutting system on the market. By integrating the compact, lightweight Iradion 1625 250 watt ceramic core CO<sub>2</sub> laser, Advanced Lasers, Inc. has designed and manufactured an innovative laser cutting solution, the **Stilus®** for the display and visual merchandising industry.

With years of experience in the laser cutting industry including engineering research with El.En Group in Italy and executive management with Penta Chutian in China, Francesco has pioneered the development of high quality laser machinery for the manufacturing of innovative display industry products.

The **Stilus®** has features that facilitate the production of point of sale display products:

- 4'x8' or 5'x10' dual pallet cutting tables
- Multi-axis linear and rotary drives for 3D cutting surfaces and effects
- Proprietary CAD-CAM software enhancing the programming of complex cutting tasks
- Patented laser cutting head and assist gas control
- Iradion 1625 250 watt laser

The Iradion 1625 250 watt 10.6 micron laser facilitated the elimination of a complex x and y-axis beam

delivery system. Instead the Iradion laser is mounted directly to the z-axis box which guarantees consistent cutting characteristics across the large cutting tables. The ability to accurately control stable power levels from 250 watts down to 1 watt allows the machine to perform unique cutting and etching tasks.



*The Iradion 1625 features a small footprint weighing 50 lbs and measuring approximately 8" x 4" x 24".*

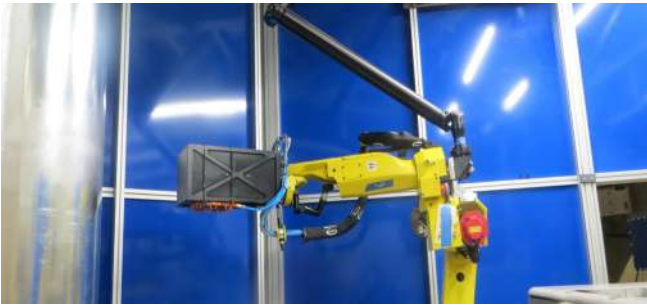
The **Stilus®** has optimized the latest technologies in lasers, drives, software and operational techniques to create a tool that will revolutionize the processing of plastics, acrylics and other materials that are used in wide range of applications: displays, architectural features, signage, lighting, and many more..



*The Stilus® has dual pallet cutting tables to maximize part production.*

**Contact Advanced Lasers, Inc. for more info:**  
**Email:** [info@advlasers.com](mailto:info@advlasers.com)  
**Phone:** (916) 475-6038  
**Website:** [www.advlasers.com](http://www.advlasers.com)

## DYNAMIC ROBOTIC SOLUTIONS-continued from page 1



*A DRS CO2 beam delivery package with optional scanner optics mounts on a FANUC M20iA robot.*

DRS specializes in 3D trimming and cutting applications. Their legendary customer service and high value solutions have earned them opportunities to serve manufacturers in a wide variety of industries including automotive, aerospace, appliance, plastics, composites, marine, renewable energy, commercial truck, off-road vehicle, and consumer products.

As an example of their innovation, DRS recently completed a turnkey solution for a major appliance manufacturer that was looking to improve the processing of large molded 3D plastic parts. Their old method was inflexible and costly to modify. Tooling wear caused poor edge condition and rejected parts.



*DRS dual turntable system enhances productivity by facilitating part loading during the cutting process.*

DRS automated the process by utilizing robots to transfer the large plastic parts in and out of a robotic laser cutting cell. Three Rofin UK SCx60 lasers integrated to individual robots with Laser Mechanisms' articulated arm beam delivery systems and scanner optics now cuts 250 holes, slots and other internal cutouts in less than 80 seconds. More importantly, the system has flexibility to be easily adapted to process new product designs.

DRS Robotic Laser Cutting cells have also made a major contribution to automotive part processing by utilizing both fiber and CO<sub>2</sub> laser technology to cut metal and non-metal parts. With more plastic molded parts being used in automobiles, DRS robotic solutions with Rofin UK CO<sub>2</sub> lasers have proliferated.



*The Iradion Infinity model mounted in the DRS robot cell, represents an automotive fabric trimming solution.*

Trimming of automotive panels, pitch processing of dashboards, ablation of bumpers and exterior panels are examples of robotic laser processing that is currently being employed to improve productivity, part quality and production flexibility.



*The DRS Application Lab features a robotic cell with the OEM65ix 650 watt laser. Note the scanner head.*

DRS has installed an application lab robotic cell with FANUC robot, Rofin UK OEM65ix CO<sub>2</sub> laser and the Laser Mechanisms articulated beam delivery. An interchangeable scanner or laser cutting head can be used to test and validate your laser application.

### Contact DRS for more info:

Email: [info.na@drsrobotics.com](mailto:info.na@drsrobotics.com)  
 Phone: (248) 564-3320

Iradion's patented ceramic core CO<sub>2</sub> lasers are manufactured in a state-of-the-art 34,000 sq. ft. facility in Uxbridge, MA. By utilizing a proprietary ceramic material and production process, the ceramic chamber hermetically seals the CO<sub>2</sub> laser gas away from the metal electrodes and parts. This eliminates the risk of metal contamination insuring the longest gas life in the industry. Also, the low coefficient of expansion of the ceramic excitation chamber insures long term power stability, beam quality and reliability.



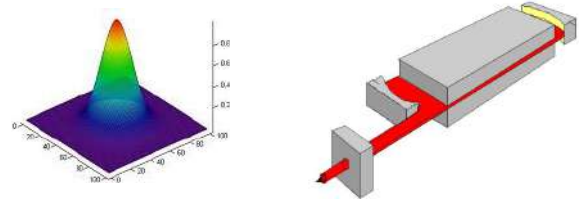
*Iradion's patented ceramic core CO<sub>2</sub> laser offers superior performance and reliability.*

In addition, this innovative architecture requires fewer components thereby reducing the laser size and weight. Finally, the design equates to manufacturing cost savings translating to the most competitive pricing for sealed CO<sub>2</sub> lasers in the industry. Iradion offers power levels from 30 to 250 watts with 10.6, 10.2 and 9.3 wavelengths. Installations include many applications: marking, ablation, cutting, packaging and others.



*Iradion's Z30/40 and Infinity 50/120 lasers offer 30 to 120 watt power levels with air or water cooling. The water cooled 1620/25 models produce 200 to 250 watts.*

rofin-sinar <sup>UK</sup> SR and OEM Lasers are produced in a new 80,000 sq. ft. plant in Hull, UK. They use a sealed, diffusion-cooled design for their laser models with power levels ranging from 100 to 650 watts.



*Rofin UK Diffusion-Cooled CO<sub>2</sub> lasers have a proven track record in demanding production environments.*

Cutting machines, packaging and label systems, robotic cells, engraving equipment and other applications have been using Rofin UK lasers for years. For example, new SR model features the best beam quality, power stability and pulsing control in the industry.



*Rofin UK SR lasers offer an integrated RF Power Supply, beam shaping optics and sealed IP66 rating design.*

The OEM45ix 450 watts laser is another new Rofin UK product that has won the accolades in the industry. PRIMES testing verifies its exceptional beam quality and thousands of installations confirm its excellent reliability as compared to other 400 to 600 watt lasers.



*Rofin UK OEM45ix has earned the reputation of "best in class" 400 to 600 watt sealed CO<sub>2</sub> laser .*

Iradion and rofin-sinar <sup>UK</sup> offer a wide selection of laser solutions, technical and application consultation. Rapid response parts and service support programs are provided by global network of offices and facilities.

Contact Iradion USA for more info:

Email: [rkloczkowski@iradion.com](mailto:rkloczkowski@iradion.com)  
Phone: 734-395-0832