

MARKET	PROJECT EXAMPLES	LASER TYPE	INTEGRATION	LASER BRAND
Industrial	Industrial sensor welding	RF CO ₂ 10,600nm 2500W Moving Optics	Radial welding with vision feature targeting for weld placement and inspection	Rofin-Sinar
Medical	Medical implant wire fusing & welding	Nd:YAG 1064nm 15W Fiber Head	Dual operation; fusing nitinol wires & welding SST screw with vision-guided robotic motion. Vision for target acquisition to locate beginning point of weld path and pre-inspection of features. Post-weld vision inspection.	Myachi Unitek
Medical	Welding SST components	Nd:YAG 1064nm 60W Fiber Head	Vision for locating target features for weld placement. Generating weld patterns.	LASAG
Medical	Cutting parts out of plastic films	RF CO ₂ 10,600nm 60W Fixed w/ Galvo	Web handling with custom vacuum platens for securing webbing and robotic pick-and-place	Synrad
Medical	Laser hole drilling in plastic sheaths	Nd:YAG 353nm 10W Fixed, Galvo	Precise hole drilling based utilizing vision mapping for hole position. Robotic material handling and post drill inspection.	Rofin-Sinar
Medical	Welding PEEK plastic components	RF CO ₂ 10,600nm 0.5W Moving Optics	Radial welding with vision feature targeting for weld placement and post inspection for complete weld and weld quality. Adjustable spot size optic path. Very tightly-controlled power stability.	Synrad
Medical	Cutting of silicone tubing	RF CO ₂ 10,600nm 15W Fixed w/ Galvo	Cutting of perimeter of tubing with 2-axis galvo scan head control from G-code motion. Product rotation about non-concentric axis.	Coherent
Medical	Cutting and ablating ePTFE coating over metal coils	RF CO ₂ 10,600nm 20W Fixed w/ Galvo	Removal of ePTFE coating from coils in a specific region. 2-axis galvo scan head control from G-code motion.	Coherent
Medical	Welding of adjacent metal coils	Fiber 1075nm 300W Fiber Head	Banding of adjacent coil filars with fiber laser head. Product moved via linear and rotary motion.	IPG
Medical	Cutting of metal coil filars	Fiber 1064nm 20W Fiber w/ Galvo	Cutting of a specific filar on a coil based on vision registration. 2-axis galvo scan head control from G-code motion.	IPG
Medical	Removal of ETFE insulation from metal cables	TEA CO ₂ 9,300nm 60W Fixed Optics	Fixed optic with reflector for 360° insulation removal.	Light Machinery
Medical	Cutting and beading of metal cables	Nd:YAG 1064nm 40W Fiber Head	Single spot cutting and subsequent beading of cables based on vision registration.	LASAG
Medical	Laser marking medical product label	CO ₂ 9300nm 30W	Multi-line text, image, and 2D barcode laser label marking with robotic assembly and vision inspection	Markem
Medical	Cutting profile of metal and ceramic	Nd:YAG 1064nm	Fixed laser with galvo head. Robotic material handling and pre/post-inspection	Trumpf

Medical	Cutting of small diameter wire	50W Femto 1552nm 5W Fixed w/ Galvo	Web handling from input spool. Integrated length and diameter vision measurement. Flow-through conveyor material handling.	Raydiance / Rofin
Medical	Removal of polyimide and ETFE insulation from metal wires and coils	TEA CO ₂ 9,300nm 60W Fixed Optics	Flexible platform with both reel-to-reel wire handling and discrete part handling. 1x to 4x programmable beam delivery.	Light Machinery
Medical	Removal of silicone from overmolded metal components	Nd:YVO4 355nm 2W Fixed w/ Galvo	Motion control of pre-loaded, removable fixtures. Integrated vision registration. Elaborate (14-step) galvo program.	DPSS
Medical	Ablation of polyurethane tubing diameter	KrF Excimer 248nm 80W Fixed Optics	Discrete part handling from removable trays. Dual rotary spindle with programmable product configuration and integrated post inspection.	Light Machinery
Medical	Ablation of organic material	Femto 1552nm 10W Fixed w/ Galvo	3D scanning and milling.	Raydiance

Materials: Ceramic, EPTFE, ETFE, Nitinol, Nitronic, Nispan, Organic, Palladium, Platinum, Polyethylene, Polyimide, Polypropylene, Polyurethane, PVA, Silicone, Stainless Steel