

**PROFESSIONAL
LASER
WELDING
SOLUTION**

MOLDS & DIES

- LASER WELDING SERVICE
- LASER WELDING MACHINES
- LASER WELDING WIRES



DIN EN ISO 3834-2:2006 Certified



Applications for Molds & Dies

- Precision/Large Plastic Mold
- Etching Surface
- High/Low Pressure Die Casting Molds.
- Forging Molds
- Rubber Molds
- Glass Molds
- Stamping tools, Fine Blanking Tools,
- Extrusion Tools
- Electronic and Sensor Products
- Metal Sheet and Etc.
- Aviation and Aerospace Toolings

Merits of Pulse Laser Welding

- High Bonding Strength
- No Need of Pre-Heating / Post-Heating
- No Distortion
- No Residual Stress
- No Base Material Micro-Structural Changing



**Available !!
On-site Welding
Service**

DSI Quick Facts

3

BRANCHES

18

WELDERS

20

MACHINES

2,000

M² AREAS



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Before

After

PIN HOLES REPAIR

Press Dies
Material : Cast Iron

SHAPE MODIFICATION

Press Dies / Injection Molds
Diecasting Molds

Cracking Repair

Wearness

COLD-WORK CRACK REPAIR

Fine Blanking Press
Material : SKD11/Hi-speed



DEPOSIT WELDING

Diecasting / Injection Molds



SMALL GROOVE FILLET

Injection & Die casting
Molds Material : NAK80 / SKD61



HOT-WORK CRACK REPAIR

Material : SKD61 / DHA-
World / H13

Laser Welding Machines Sales

ALPHA LASER GmbH's Thailand Sole Authorized Dealer



ALPHA LASER GmbH (Germany)

TECHNICAL DATA	AL 75	AL 120	AL 150	AL 200	AL 300
LASER					
Laser Type / Wave length	Nd:YAG, 1064 nm				
Average power	75W	120W	150W	200W	300W
Peak pulse power	7 kW	9 kW	9 kW	9 kW	9 kW
Pulse energy	60 J	75 J	75 J	90 J	90 J
Pulse duration	0.5 – 20 ms				
Pulse Frequency	50Hz	100Hz	100Hz	100Hz	100Hz
Operating mode	Pulsed				
Welding spot Ø	0.2 – 2.0 mm With micro welding function (optional) < 100 µm				
Focusing objective	150 mm, further according to lens data sheet				
Pulse shaping	Adjustability of power curve within a laser pulse				
Display and operation	Display with membrane keyboard Laser parameters can also be set using a multifunctional footswitch, Interface for triggering WINLaserNC software through an external PC				
OBSERVATION LENS	Leica microscope attachment with eyepieces for glasses wearers, 10x Optional 16x				
POWER SUPPLY UNIT					
WxDxH (basic component) in mm	820 x 400 x 910 mm				
Weight	120 kg				
LASER BEAM SOURCE					
With focusing unit (length x Ø)	900 x 120 mm			1100 x 120 mm	
Weight	approx. 18 kg			approx. 20 kg	
EXTERNAL CONNECTIONS					
Electrical connection	200-240 V / 50–60 Hz / 3 x 16 A		3 x 400 V / 50-60 Hz / 3 x 16 A		
Extreme cooling	Prepared				

Application Arm

DSI (Germany)	LAV 100NL (DSI Special Designed)
Moving Strokes	500 mm-2,100 mm
Maximum Workpiece Dimension	3,000 x 3,000 x 2,000 mm
Tilting & Adjustment	360° Tilting
Driving Unit	Electric Cylinder & Power Lift System

Dust Collector

Model	THB (Germany) : LN230
Power	250 m3/h
Standard	H14



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AL + LAV 100NL (DSI-Style) + LN230
Practicality + Flexible: Designed to simply adjust to workpiece shape



ALT / ALM / ALFLAK
Mobile System + Programming Functionality



VL50/ALS100/ALV/ALW Closed-Type
Comfortable with highest safety

Laser Welding Wires

DSI Red Label :

Classic blending of the finest quality

- Hot & Cold Tools steel (HRC 70 Max.), High Speed Steel
- Stainless, STAVAX, NAK55/80
- Cast Iron
- Aluminum, Titanium, Nickle
- Copper, Copper Alloy (BeCu, CrCu)
- Super Alloys, Inconel 625, Inconel 718
- Special Wires for Mirror Finishing, Etching Surface

Available Sizes

Spools: Ø mm 0.2 / 0.25 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 1.0 / 1.2
Rods (1,000 mm) : Ø mm 1.6 / 2.0



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Laser Welding Training Course

According to German Welding Society (DVS)

1. Laser Safety Training : BGV-B2
2. Laser Welding Training & Machine Operation



DSI Global Team

ALPHA LASER



USA

France

Germany

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