ABOUT
HYMSON NOVOLAS

As a core pillar of the Hymson Laser Technology Group's global strategy, Hymson Switzerland is firmly established in Europe, focusing on the research, development, production, and worldwide after-sales service of precision laser manufacturing technology. On February 27, 2025, the Hymson Group successfully completed the strategic acquisition of the Laser Plastic Welding (LPW) division of the Leister AG in Switzerland. Following this acquisition, LPW has been rebranded as Hymson Novolas, marking a new chapter in innovation and advancement in cutting-edge laser plastic processing technologies. This strategic move enhances the company's ability to deliver superior and more reliable products, as well as comprehensive solutions to customers worldwide.

Continuous innovation ensures a promising future. Leveraging the Hymson Group's deep expertise in intelligent laser manufacturing, Hymson Novolas remains committed to meeting the needs of existing customers while integrating AI technology and Industry 4.0 principles into future product development. With its Swiss R&D center serving as a driving force for innovation, the company will accelerate the Hymson Group's technological advancements and strategic research collaborations across Europe. By pioneering next-generation laser automation and intelligent manufacturing solutions, Hymson Novolas is poised to further strengthen its global service network.

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Hymson | NOVOLAS

LASER PLASTIC WELDING

EMBRACE THE PLASTIC WELDING ERA
PROPEL LASER INNOVATION FORWARD

LASER PLASTIC WELDING

Laser Plastic Welding has established itself worldwide through its outstanding performance and application-specific solutions. Markets such as the automotive and medical technology are increasingly opting for laser welding of plastics.

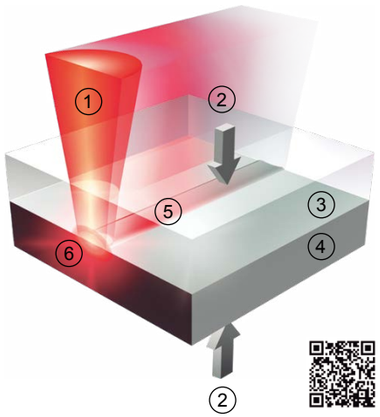
- Contactless energy input
- Minimal thermal and mechanical component stress
- Simple joint geometry
- Contamination-free
- Optically perfect weld seam
- High precision and strength

LASER WELDING PRINCIPLE

In laser welding of thermoplastics, a joining partner that is transparent to the laser radiation is joined to an absorbent joining partner.

The laser beam penetrates the transparent plastic and hits the absorbing plastic. There, the energy of the radiation is converted into heat and the plastic melts. Because the transparent plastic is in close contact with the absorbing partner, thermal conduction causes it to melt as well, therefore a bond is formed. When the plastics cool, the weld is completely formed.

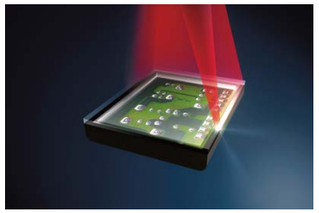
LASER TRANSMISSION WELDING ILLUSTRATION



1. Laser beam
2. Joining pressure
3. Transparent joining partner
4. Absorbing joining partner
5. Weld seam
6. Heat affected zone

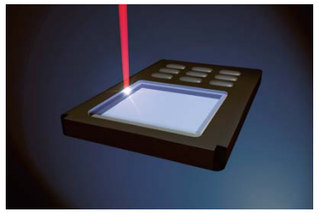
LASER WELDING PROCESS

The variety of welding processes results in solutions tailored to materials, applications, and individual needs. Depending on the application, additional options are available for process and quality control.



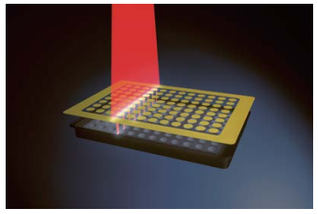
Quasi-simultaneous Welding

- Point-shaped laser beam
- Unlimited pattern flexibility
- Bridges gaps



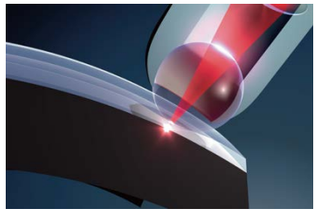
Contour Welding

- Point-shaped laser beam
- Adjustable weld seam width
- Any 2D contour



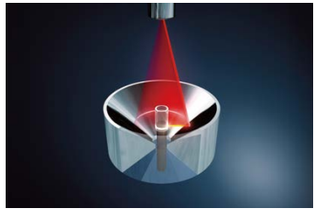
Mask Welding

- Line-shaped laser beam
- Any 2D weld seam geometry
- Fast and precise



Globo Welding

- 3D welding possible
- Simplified clamping technology
- Sequential pressing



Radial Welding

- No rotation
- Different diameters possible
- High throughput

Simultaneous Welding

- Short process time
- No relative movement
- Gap bridging possible

STANDALONE SYSTEMS

MAXI

Specialize in large components, can be flexibly configured as a manual workstation for specific applications and processes.

NOVOLAS WS-AT

Modular and universal system, can be easily configured as a manual workstation for specific applications and processes.

NOVOLAS WS-AT RTT

Equipped with a rotary indexing table (RTT), allowing safe loading and unloading during internal welding operations.

NOVOLAS TTS

Efficient and compact system, containing all necessary components, saving space and easy to program via HMI software.

INTEGRATION SYSTEMS

INLINE WELDER

Integration system for production lines, designed to weld 2D contours using a Scanner Optic.

Basic S/M/L

Laser welding system for integration into industrial production lines. Can be tailored to meet diverse industrial requirements.