



PULSE LASER WELDING MACHINES

DSI LASER SERVICE (THAILAND) CO.,LTD.
Authorised Dealer of ALPHA LASER



dsilaser.com





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AL-Machines
DSI-Homepage

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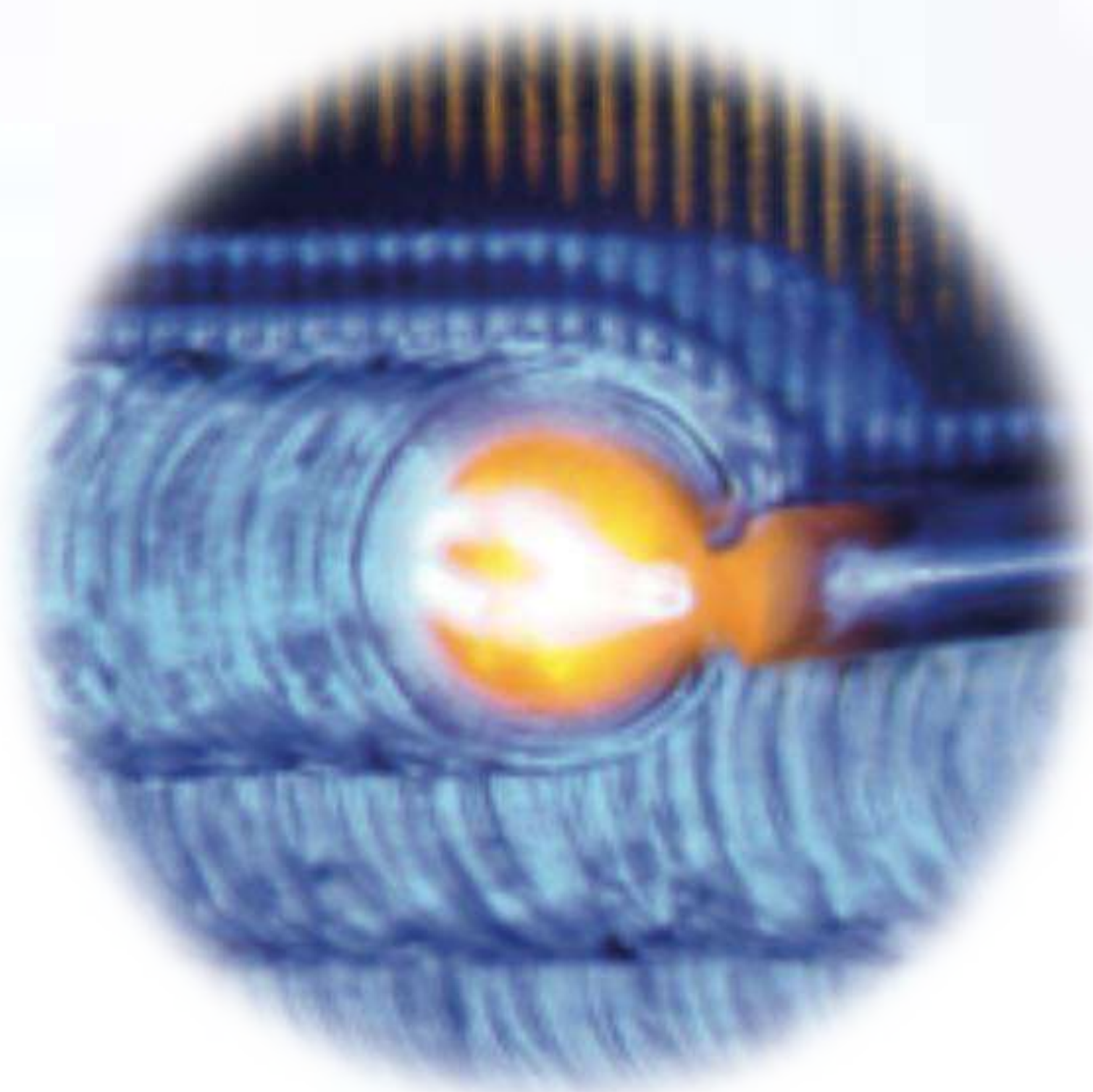
DSI Total Solution

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ALPHALASER

SOUTHEAST ASIA





The ALM offers exceptionally short setup times, enabling rapid repair and modification of a wide range of machine components, pressing tools, and large molds - virtually anywhere.

Its impressive versatility allows either the workpiece to be brought to the laser or the laser to be taken to the workpiece, ensuring maximum mobility both within the company or customer sites.

TECHNICAL DATA

Nd:YAG-LASER POWER (WATT)

200 250 300



The system meets the high safety requirements of performance level d.

LASER (technical values see p. 54/55)

Display and operation

Display with keypad. Laser parameters can also be set using a multifunctional footswitch, motor controls can be set through a touch screen or optional external operating unit.

OBSERVATION OPTIC

Leica microscope attachment with eyepieces for glasses wearers 10 ×, optional 16 ×

WORK AREA

The processing head can be freely positioned in the space and additionally moved using a joystick

Movement speed (X, Y, Z)	0 to 25 mm/s
Movement range (X, Y, Z)	120 × 110 × 800 mm
Lowest working point	530 mm
Highest working point	1,590 mm
Arm deflection	1,300 mm

EXTERNAL DIMENSIONS

W × D × H	730 × 1,410 × 1,585 mm
Weight	320 kg

EXTERNAL CONNECTIONS

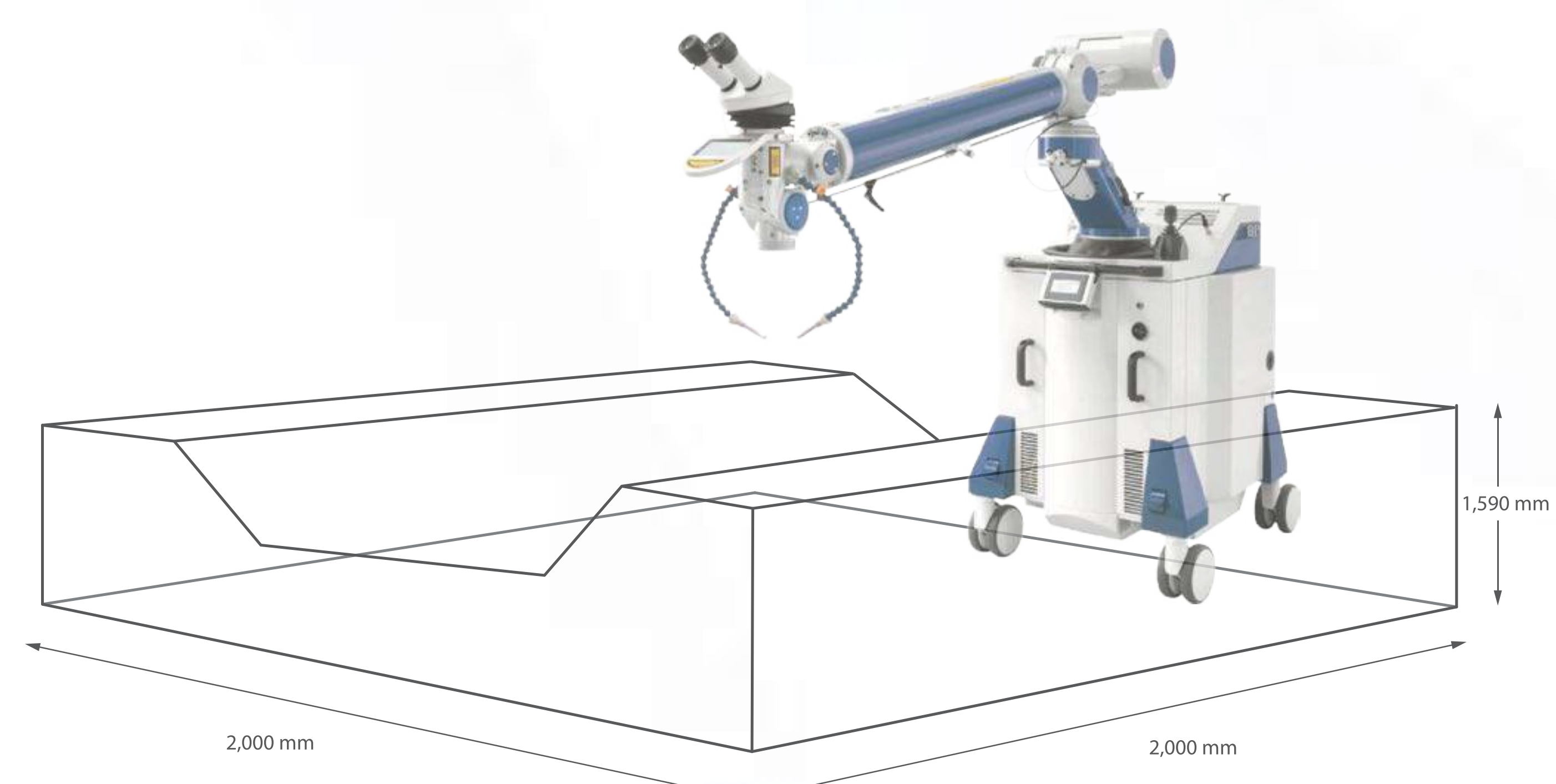
Electrical connection	3 × 400 V / 50–60 Hz / 3 × 16 A
External cooling	ALM 200: optional ALM 250, 300: prepared

OPTIONS

Turn-tilt-objective // rotating axis with chuck with chuck, tiltable, for horizontal to vertical rotation // external operating unit // Camera system for demonstrating and observing the welding // Ergo wedge

Discovery of key benefits

- Open laser system – operate without spatial restrictions for maximum workspace freedom
- Safe operation – performance level D
- Compact design
- Very short setup times, quick use
- Exceptional flexibility of laser head
- Precision control by 4 axis joystick



Highest working point 1,590 mm



The AL-IN is recommended for users who value maximum flexibility in workpiece placement.

Thanks to its open design, components can be freely positioned beneath or beside the laser system. A wide range of worktables can be placed in front of the lifting column, or you can work directly on the pallet for added convenience.

TECHNICAL DATA

Nd:YAG-LASER POWER (WATT)

120 150 200 300



The system meets the high safety requirements of performance level d.

FIBER LASER POWER (WATT)

150 300 450 600 900* 1200*

*Housing as for AL 1200 (p.18)

LASER (technical values see p. 54/55)

Display and operation Removable touch screen (for laser- and movement system)

OBSERVATION OPTIC

Leica microscope attachment with eyepieces for glasses wearers 10 ×, optional 16 ×

EXTERNAL CONNECTIONS

Electrical connection Nd:YAG **AL-IN 120:** 200–240 V / 50–60 Hz / 16 A
AL-IN 150–300: 3 × 400 V / 50–60 Hz / 3 × 16 A
AL-IN 150 F–600 F: 200–240 V / 50–60 Hz / 16 A
AL-IN 900 F–1200 F: 3 × 400 V / 50–60 Hz / 3 × 16 A

System cooling Air-cooled
AL 450 F–AL 1200 F: also available with water cooling

OPTIONS

Turn-tilt-objective // multifunctional footswitch // rotating axis with chuck // camera system // ergo-wedge // AL-DV programmable laser wire feeder // AL-DRIVE // AL-Hub work bench

MOVEMENT SYSTEM FOR AL-IN

EXTERNAL DIMENSIONS

W × D × H 950 × 1,250 × 850 mm
Weight 230 kg

WORK AREA

Machines axes X, Y, Z, rotary axis optional
Movement speed (X, Y, Z) Max. 25 mm/s
Movement range (X, Y, Z) 400 × 210 × 300 mm
Operation Joystick

Discovery of key benefits

- Can be used flexibly robust powerful
- The laser head can be pivoted 360°
- Welding speed up to 100Hz/s
- User coordinate system for easy welding
- App for surfaces and rotational parts
- Precision control by 4 axis joystick
- Capable of full automatic welding & wire feeding



Adjustable mobile table that supports loads up to 100 kg



Detachable display

AL SERIES

DSI-CUSTOMIZED VERSION
FLEXIBLE AND ROBUST LASER DEVICE FOR
WELDING A WIDE VARIETY
OF COMPONENTS



The AL combined with LAD-Arm

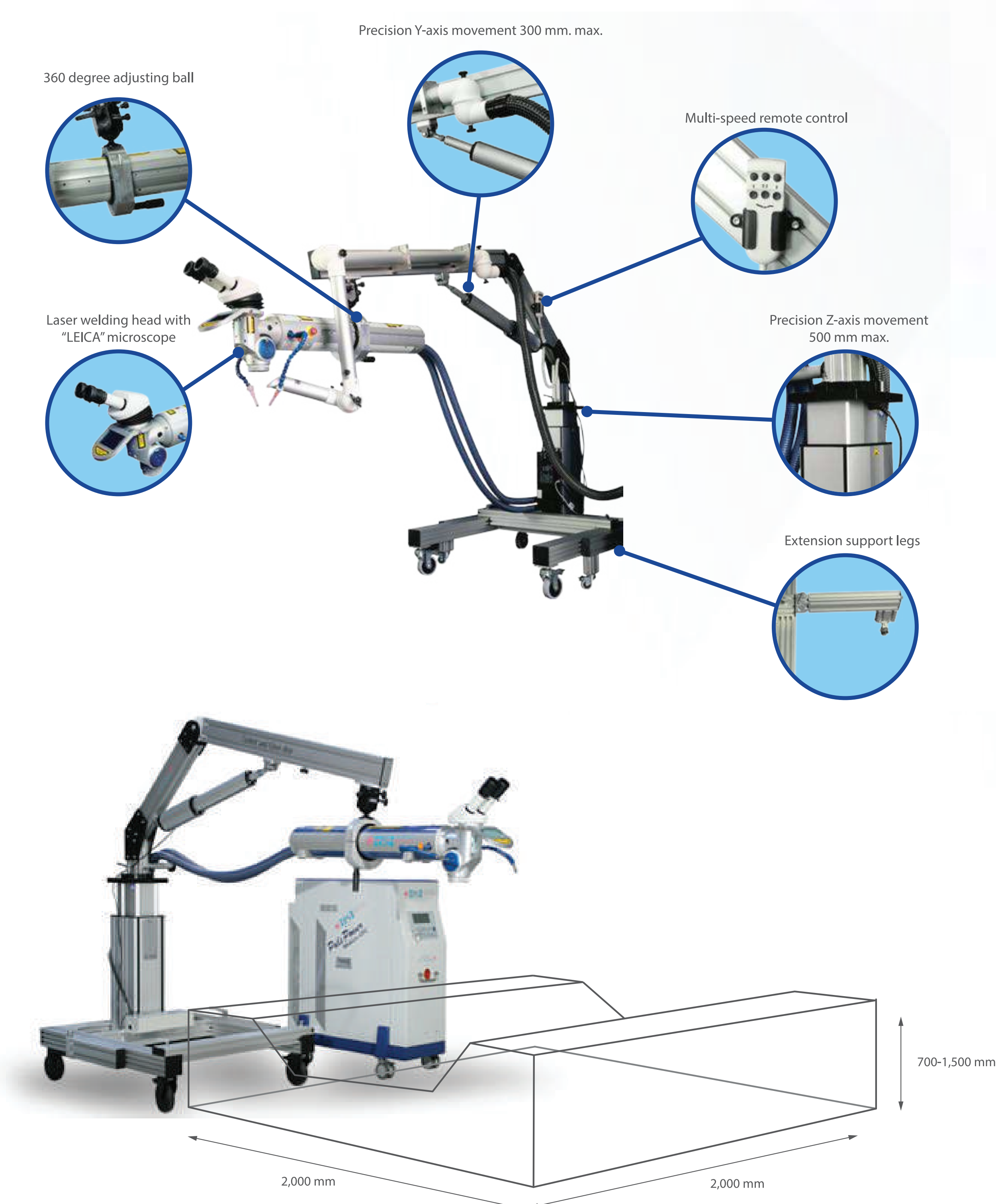
High-precision is designed to precision works, including oversized and variable-dimension workpieces, to meet the specific needs of various industry sectors.

This set-up is practicable and convenient for MOBILE WELDING at site.



Discovery of key benefits

- Can be used flexibly robust powerful
- The laser head can be pivoted 360°
- Welding speed up to 100Hz/s
- Robust and rigid machine structure
- Cost performance design
- High flexibility and light weight design



Highest working point 1,500 mm

TECHNICAL DATA

Nd:YAG-LASER POWER (WATT)

120 150 200 300 500



The system meets the high safety requirements of performance level d.

FIBER LASER POWER (WATT)

150 300 450 600 900* 1200*

*Housing as for AL 1200 (p.18)

LASER (technical values see p. 54/55)

Display and operation

Removable touch screen
(for laser- and movement system)

OBSERVATION OPTIC

Leica microscope attachment with eyepieces for glasses wearers 10 x, optional 16 x

EXTERNAL CONNECTIONS

Electrical connection Nd:YAG

AL-IN 120: 200–240 V / 50–60 Hz / 16 A
AL-IN 150–300: 3 × 400 V / 50–60 Hz / 3 × 16 A
AL-IN 150 F–600 F: 200–240 V / 50–60 Hz / 16 A
AL-IN 900 F–1200 F: 3 × 400 V / 50–60 Hz / 3 × 16 A

System cooling

Air-cooled
AL 450 F–AL 1200 F: also available with water cooling

OPTIONS

Turn-tilt-objective // multifunctional footswitch // rotating axis with chuck // camera system // ergo-wedge // AL-DV programmable laser wire feeder // AL-DRIVE // AL-Hub work bench

MOVEMENT SYSTEM FOR AL-IN

EXTERNAL DIMENSIONS

W × D × H 950 × 1,250 × 850 mm
Weight 230 kg

WORK AREA

Machines axes X, Y, Z, rotary axis optional
Movement speed (X, Y, Z) Max. 25 mm/s
Movement range (X, Y, Z) 400 × 210 × 300 mm
Operation Joystick



The ALFLAK equipped with ND:YAG laser technology, offers unmatched flexibility in choosing laser sources and power, supporting a wide range of welding applications. Its slim laser arm and intelligent mobility system allow easy access to large or complex workpieces whether operated manually via joystick control or programming.

TECHNICAL DATA

Nd:YAG-LASER POWER (WATT)

200 300



The system meets the high safety requirements of performance level d.

LASER (technical values see p. 54/55)

Display and operation

Display with keypad. Adjustment of the laser parameters additionally via multifunctional foot switch. Operation of WINLaser 5.0 via touch screen.

OBSERVATION OPTIC

Leica microscope attachment with eyepieces for glasses wearers 10 ×, optional 16 ×

WORK AREA

Movement speed (X, Y, Z)	0 to 25 mm/s
Movement range (X, Y, Z)	340 × 330 × 370 mm
Lowest working point	200 mm
Highest working point	1,500 mm
Arm deflection	1,500 mm

EXTERNAL DIMENSIONS

W × D × H (base unit incl. chassis)	1,200 × 1,200 × 1,100 mm
Weight	With caterpillar track approx. 850 kg, without approx. 550 kg

EXTERNAL CONNECTIONS

Electrical connection	3 × 400 V / 50–60 Hz / 3 × 16 A
External cooling	Prepared

OPTIONS

Turn-tilt-objective // function micro welding // rotating axis with chuck, tiltable, for horizontal to vertical rotation // Camera system for demonstrating and observing the welding // Ergo wedge // AL-DV programmable laser wire feeder

Discovery of key benefits

- Open laser system – Operate without spatial restrictions for maximum freedom in your workspace
- Large movement paths – welding seams up to 340 mm are possible
- Welding speed up to 100Hz/s
- Solid construction – perfect for programmed welding
- Programmable via WINLaser software and teach-in easy to operate
- Precision control by 4 axis joystick
- Capable of full automatic welding & wire feeding



ALFlak Nd:YAG stationary

ALFLAK F SERIES

SELF-PROPELLED, ROBUST,
PROGRAMMABLE
FIBER SYSTEM



The **ALFLAK F** equipped with fiber laser sources, optionally with 300, 450, 600, 900 or 1200 W. This version is ideal for applications requiring a validated process, continuous wave (CW) or pulsed welding, deep penetration in sheet metal, laser cladding, and melting thick wire up to 2.0 mm in high-performance applications.



Discovery of key benefits

- Open laser system – Operate without spatial restrictions for maximum freedom in your workspace
- Powerful: The ALFlak is available up to 1200 watts
- Large movement paths – welding seams up to 340 mm are possible
- Welding speed up to 100Hz/s
- Solid construction – perfect for programmed welding
- Programmable via WINLaser software and teach-in easy to operate
- Precision control by 4 axis joystick
- Capable of full automatic welding & wire feeding



Easy control with direct camera view

TECHNICAL DATA

FIBER LASER POWER (WATT)

300 450 600 900* 1200*



The system meets the high safety requirements of performance level d.

LASER (technical values see p. 54/55)

Display and operation

Touch display. Additional setting of the laser parameters via multifunctional foot switch. Operation of WINLaser 4.0 software via touch screen.

OBSERVATION OPTIC

Leica microscope attachment with eyepieces for glasses wearers 10 ×, optional 16 ×

WORK AREA

Movement speed (X, Y, Z)	0 to 25 mm/s
Movement range (X, Y, Z)	340 × 330 × 370 mm
Lowest working point	565 mm
Highest working point	1,780 mm
Arm deflection	approx. 1,400 mm

EXTERNAL DIMENSIONS

W × D × H (base unit incl. chassis)	1,200 × 1,030 × 1,150 mm
Weight	With caterpillar track approx. 910 kg, without approx. 610 kg

EXTERNAL CONNECTIONS

Electrical connection	3 × 400 V / 50–60 Hz / 3 × 16 A
External cooling, sealing air	ALFlak 300 F, 450 F: Optional ALFlak 600 F, 900 F: Optics cooling and sealing air integrated

OPTIONS

Turn-tilt-objective // rotating axis with chuck, tiltable, for horizontal to vertical rotation // Camera system for demonstrating and observing the welding // Ergo wedge // AL-DV programmable laser wire feeder
ALFlak 600 F, 900 F additionally:
Powder nozzle AL-FLOW Powder // water-cooled turn-tilt-objective



The ALV features a compact, ergonomic design with a laser-safe working chamber. Available with a range of laser sources, powers, and manual or program control options, it's perfect for ultra-precise micro-welding in mold repair, medical device manufacturing and precision sensor production.

TECHNICAL DATA

Nd:YAG-LASER POWER (WATT)

120 180



The system meets the high safety requirements of performance level d.

FIBER LASER POWER (WATT)

150 300 450

LASER (technical values see p. 54/55)

Display and operation Touchscreen. Setting of the parameters also via the optional multifunctional foot switch.

OBSERVATION OPTIC

Leica microscope attachment with eyepieces for glasses wearers 10 ×, optional 16 ×

WORKING CHAMBER

W × D × H	580 × 420 × 530 mm
Mounting plate (W × D)	455 × 315 mm; Table feed through downwards (oblong hole Ø 46 × 40 mm)
Workpiece weight	Max. 50 kg, zentrale Last
Workpiece movement	Motorized via Joystick (manual, semi-automatic or automatic)
Movement range (X, Y, Z)	110 × 90 × 280 mm
Movement speed	0 to 25 mm/s
Exhaust	Integrated

EXTERNAL DIMENSIONS

W × D × H	650 × 1,160 × 1,590 mm
Weight	260 kg

EXTERNAL CONNECTIONS

Electrical connection	200–240 V / 50–60 Hz / 16 A ALV 180: 3 × 400 V / 50–60 Hz / 3 × 16 A
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OPTIONS

Various rotary axis modules with chuck (also pneumatic) for horizontal/vertical rotary movements // micro welding function // camera system for demonstration and observation of the welding process // ergo wedge // multifunctional foot switch // hinged doors // turn-tilt-objective // lens extension for f = 120 mm laminar nozzle

Discovery of key benefits

- Precision - Ultra-fine spot welding < 0.1 mm
- Safe operation - The system fulfils performance level D
- Spacious vertical travel range with wide-opening chamber
- 3-axis movement (X, Y, Z), Z-axis supports up to 50 kg
- Precision control by 3 axis joystick
- Optional hinged side doors for easy workpiece access



Quick conversion to an open workplace

ALO SERIES

ERGONOMIC AND FLEXIBLE
MANUAL LASER WELDING



The **ALO** series is ideal for users who need to weld long or bulky parts quickly and precisely. Designed for comfort, safety, and easy manual handling, it features a laser-safe chamber with wide openings for convenient access.



Discovery of key benefits

- Nd:YAG laser power: 100 or 120 W
- Manual or programmable (ALO 120 micro with PLC touchscreen)
- Spacious working chamber 560 × 346 × 214mm
- High workpiece clearance (up to 104 mm)
- External cooling for high-frequency use



Work made simple, convenient, and modern

TECHNICAL DATA

Nd:YAG-LASER POWER (WATT)

100 120



The system meets the high safety requirements of performance level d.

LASER (technical values see p. 54/55)

Display and operation	ALO 100, 120: manual ALO 120 micro: PLC programmable via touch screen
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WORKING CHAMBER

W × D × H	560 × 346 × 214 mm
Max. workpiece height	104 mm
Exhaust	Integrated

EXTERNAL DIMENSIONS

W × D × H	600 × 954 × 1,300 mm
Weight	approx. 145 kg

EXTERNAL CONNECTIONS

Electrical connection	200–240 V / 50–60 Hz / 16 A
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OPTIONS

	ALO 100	ALO 120	ALO 120 micro
Micro welding function	○	○	●
Working chamber with slots	—	—	●
LED deflection unit	○	○	●
Motor for rotary axis	○	○	●
Connection for cooling	○	○	○
Rotary axis manual	○	○	○
Rotary axis pneumatic	—	—	○
Micro manipulator	○	○	○

— Not available ○ Optional ● Standard



The VLO 60 is a compact manual welding laser with outstanding beam stability. Ideal for precision tasks such as dental work, jewelry welding, sensor manufacturing, and fine tool and mold applications.

TECHNICAL DATA

Nd:YAG-LASER POWER (WATT)

60



The system meets the high safety requirements of performance level d.

LASER (technical values see p. 54/55)

Display and operation Display with keypad. Touchscreen optional.

OBSERVATION OPTIC

SMK (Leica Binocular optional)

WORKING CHAMBER

W × D × H 475 × 232 × 192 mm
Max. workpiece height 88 mm (200 mm with deeper working chamber)
Exhaust Integrated (H14)

EXTERNAL DIMENSIONS

W × D × H 510 × 645 × 430 mm
Weight 50 kg

EXTERNAL CONNECTIONS

Electrical connection 200–240 V / 50–60 Hz / 10 A

OPTIONS

Micro welding function // camera system for demonstration and observation of the welding process // ergo wedge // halogen dimmer // LED ring lighting

Discovery of key benefits

- Nd:YAG laser power: 60 W
- Intuitive keypad operation (optional touchscreen)
- Large, well-lit working chamber (475 × 232 × 192 mm)
- Max. workpiece height: 88 mm (200 mm with deeper chamber)
- Integrated exhaust system



Easy parameter set-up via touch screen



DSI Total Solution for Pulse Laser Welding with DSI Laser Wires

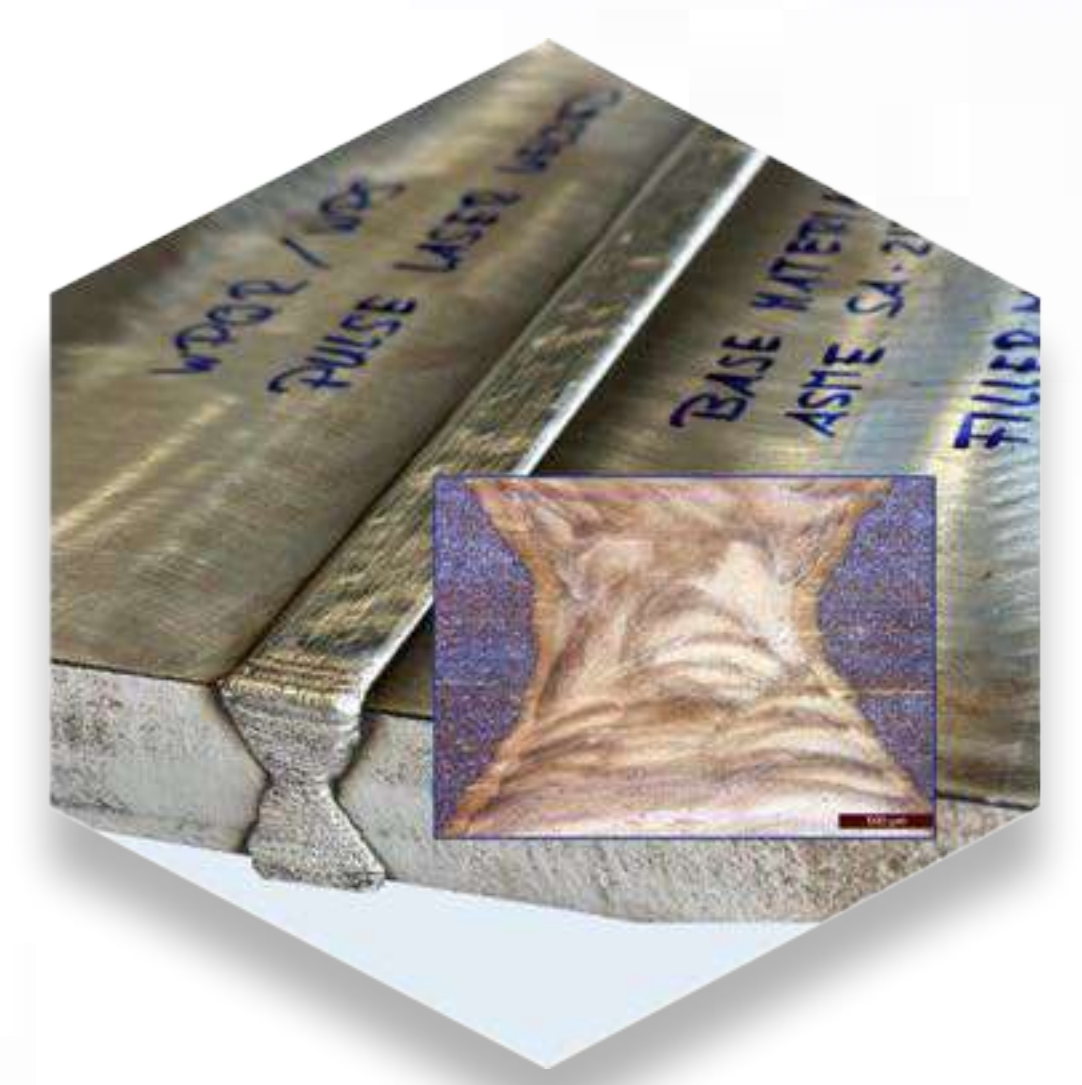
Pulse Laser Welding Service

DSI Laser Wires

Authorised dealer of ALPHA LASER

AL-Machines Service & Maintenance

DSI Thailand Laser-Welding-Academy





LASER WELDING MACHINE

SERVICE & MAINTENANCE

○ DSI Total Solution for ◆ Pulse Laser Welding with ● DSI Laser Wires



Scan DSI
Service & Maintenance

LASER WELDING MACHINE

SERVICE & MAINTENANCE



Installation and Commissioning



Preventive Maintenance Program



Repair and Overhaul



ALPHA LASER spare parts on stock



Machine operation training

Our team is ready to service customers
in Thailand, and whole Southeast Asia.

○ DSI Total Solution for  Pulse Laser Welding with  DSI Laser Wires



Scan DSI
Service & Maintenance

✓ Genuine Spare Parts from The OEM Manufacturer

In collaboration with **ALPHA Laser GmbH**, we ensure high-quality service and genuine parts according European standards.

🇹🇭 Spare Parts Stock in Thailand

Comprehensive Machine Maintenance Services 100% of consumable parts and 90% of machine parts are stocked locally for fast delivery and support.

🛡️ Preventive Maintenance Program

Minimize downtime with tailored maintenance plans following industry standards

🔍 Holistic Monitoring System

An integrated system covering every step:

- **Installation:** Site survey & risk assessment
- **Inspection:** Machine performance
- **Repair:** Root cause analysis & problem reports
- **Collaboration:** In interaction with Alpha Laser Germany provide the best recommendation for customers



Scan DSI
Service & Maintenance

Why schedule Preventive Maintenance (PM) for your laser welding machine?

✓ **Reduce Downtime**

90% of machine issues come from poor maintenance

✓ **Lower Risk of Failure**

Prevents poor weld quality, pinholes, and incomplete welding due to machine errors.

✓ **Boost Efficiency**

Proper PM = Higher precise output.

✓ **Enhance Safety**

Safety checks follow **DGUV Regulation 11**

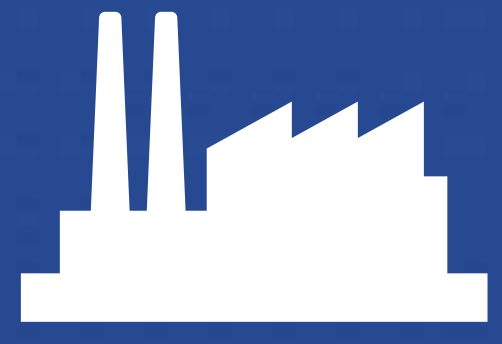


 What the PM Package includes :

Service	Frequency	Included
✓ Machine preventive maintenance, alignment & inspection	4 times / year	✓
✓ Resonator system inspection & alignment	Included	✓
✓ Cooling system check, cleaning & fluid replacement	Included	✓
✓ Electronic system inspection	Included	✓
✓ Laser output power calibration	4 times / year	✓

 Premium Support - All Inclusive

Support Package	Duration	Included
✓ Free machine check & repair service	1 year	✓
✓ Free on-site welding technical advice	1 year	✓
✓ Re-training course	1 time / year	✓

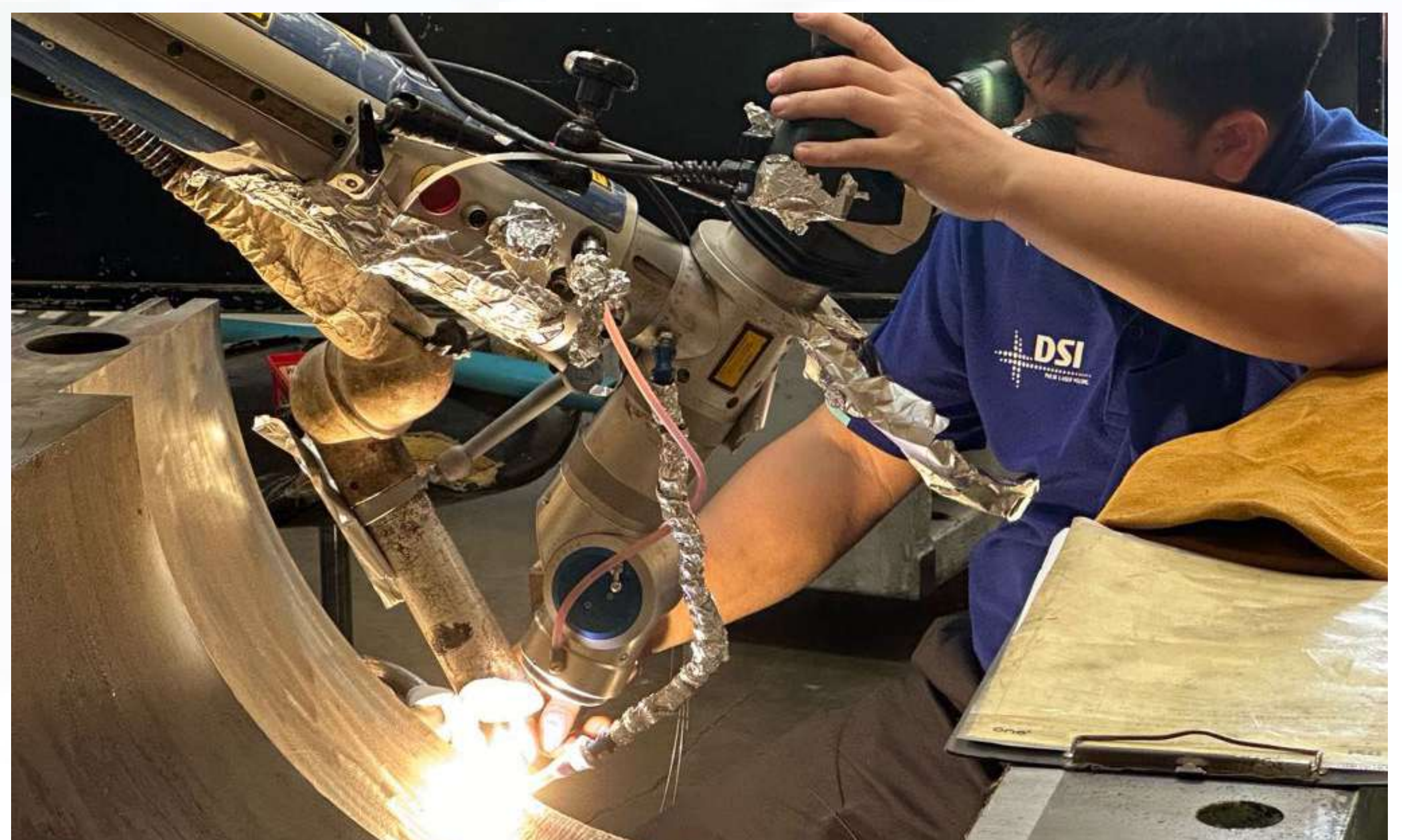


Applicable for any Industry

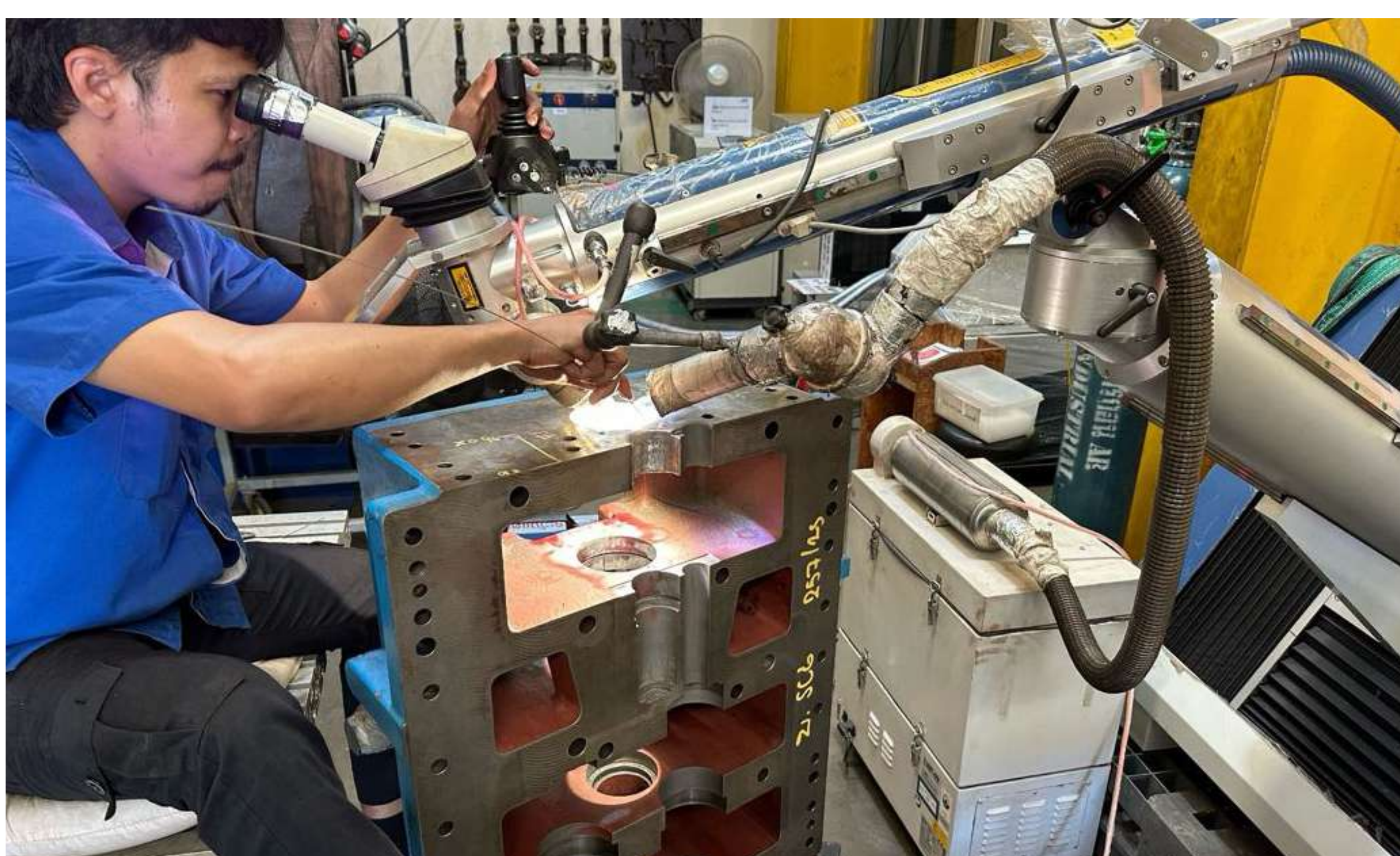
MOLDS & DIES

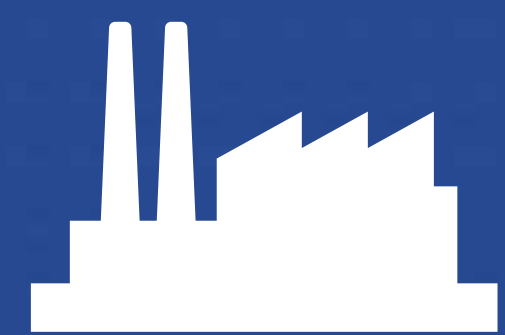


AUTOMOTIVE / CAR BODY REPAIR



PETROCHEMICAL

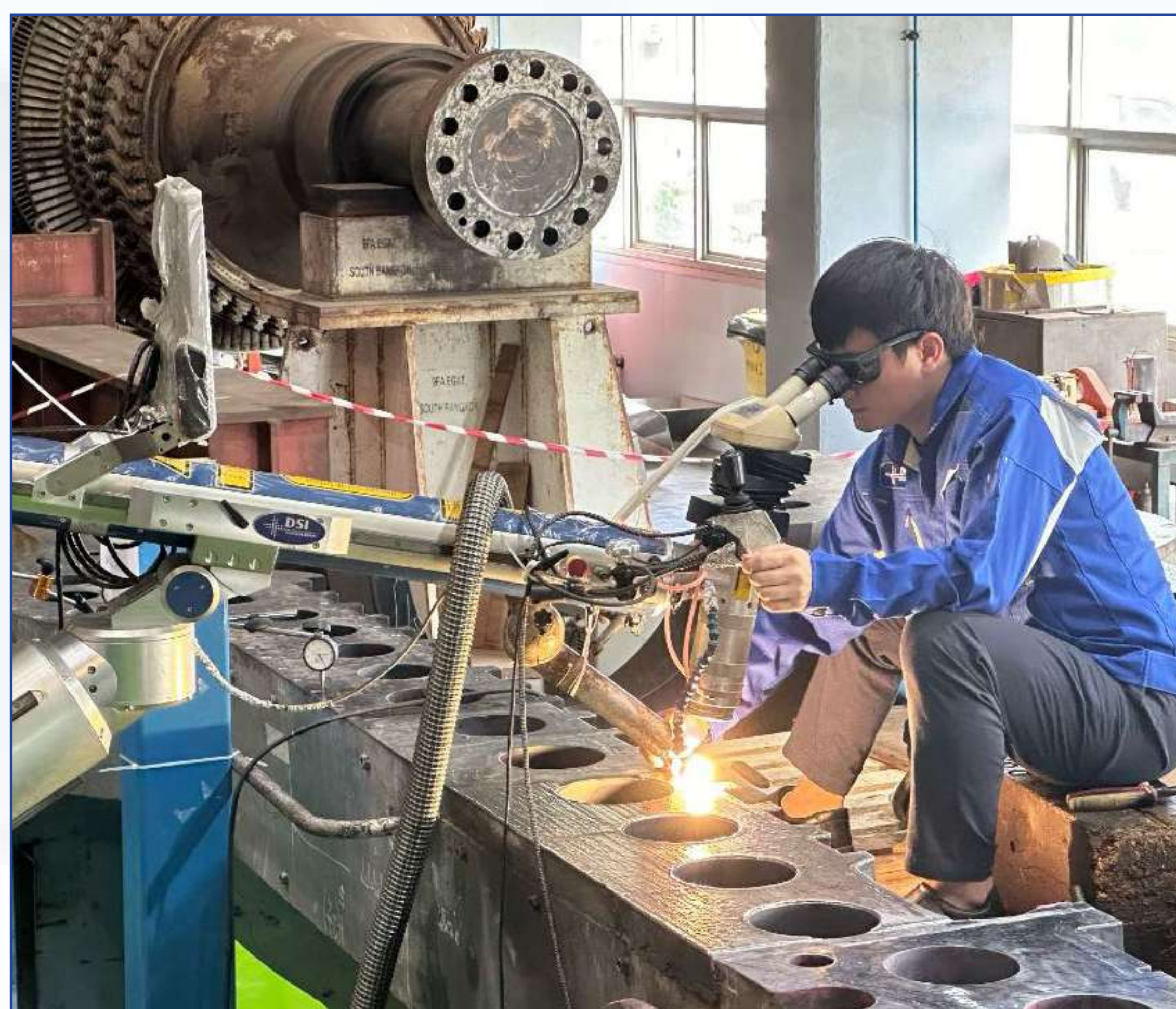




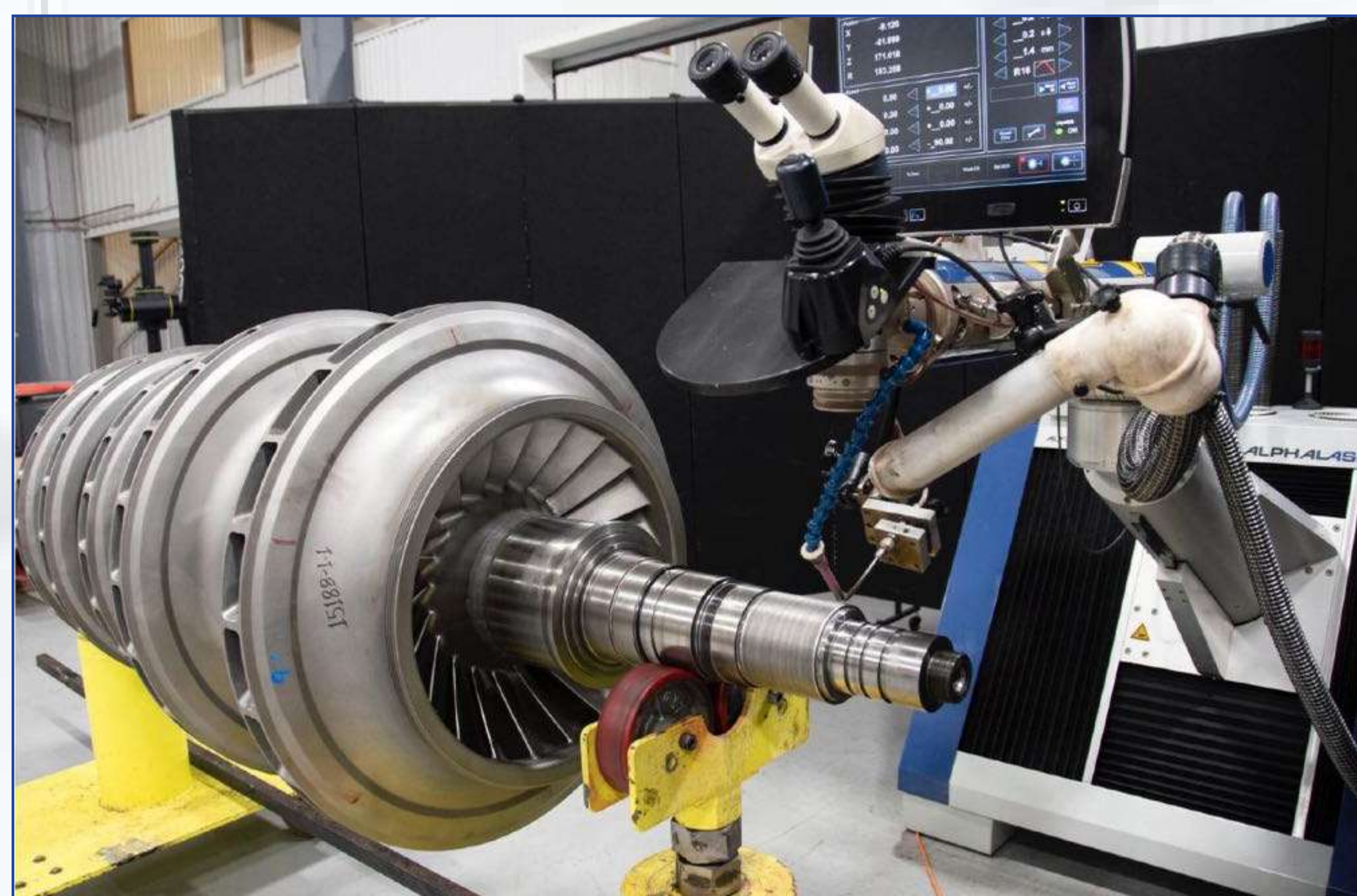
Applicable for any Industry



PLW-application
DSI-Dropbox



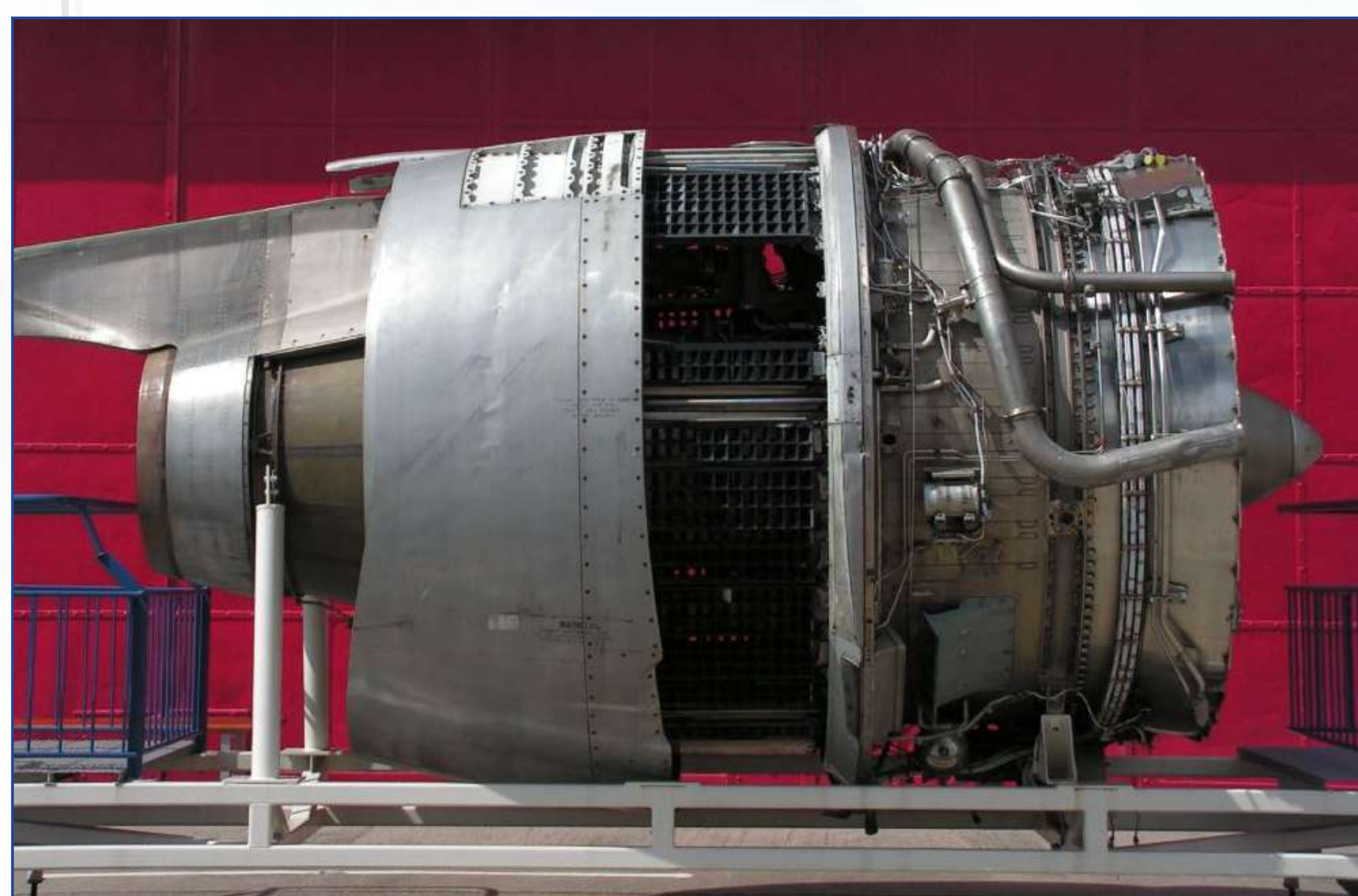
POWER GENERATION



HEAVY INDUSTRY



AEROSPACE (MRO)





LASER WELDING WIRES

DSI LASER SERVICE (THAILAND) CO.,LTD.



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Applications



DSI M 10



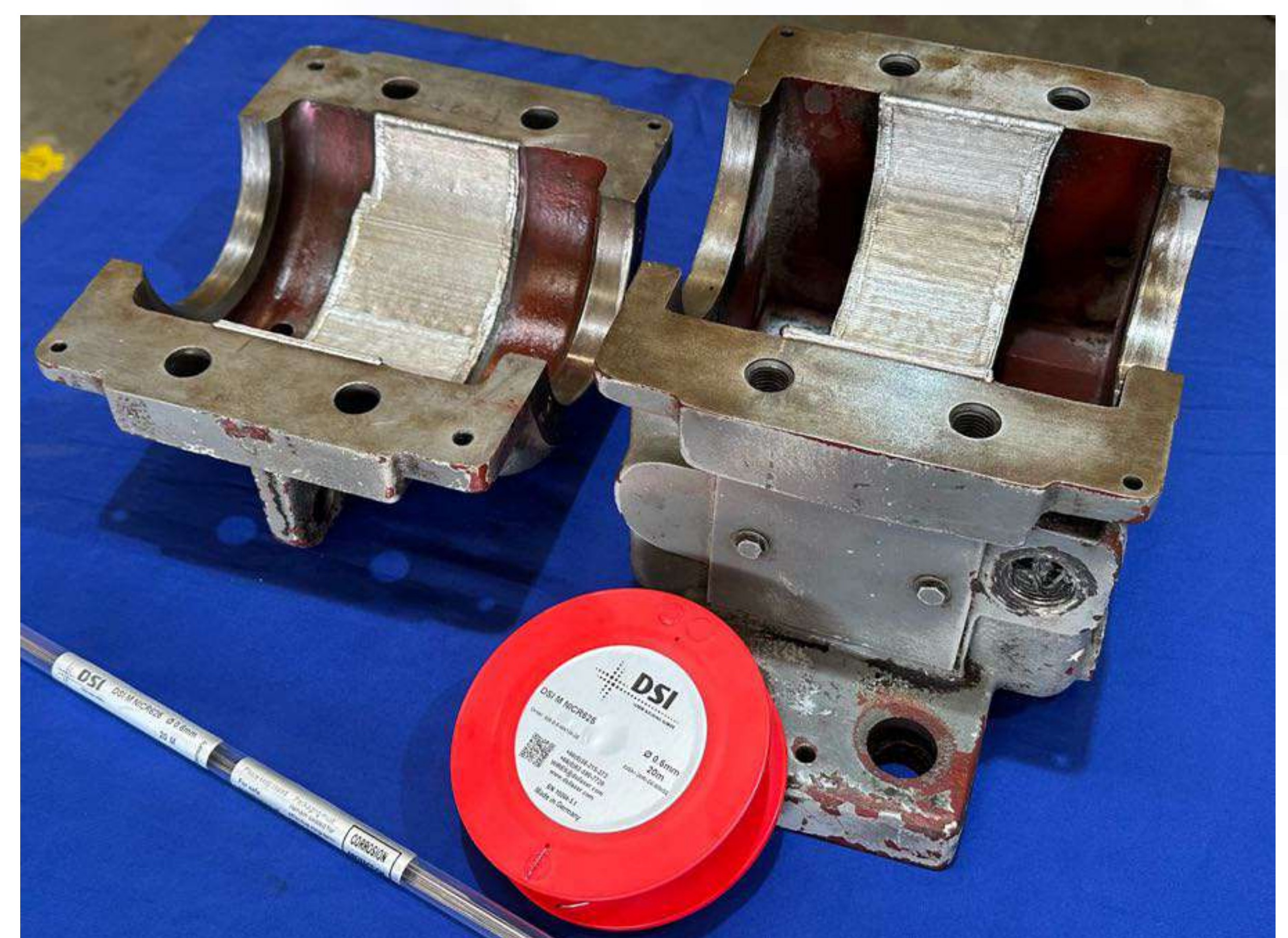
DSI M 20Plus



DSI M 70/12



DSI M AluCF



DSI M NiCr625



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PULSE LASER WELDING ACADEMY

DSI LASER SERVICE (THAILAND) CO.,LTD.



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PULSE LASER WELDING ACADEMY



EDUCATION

MODULE 1: Laser safety regulation

MODULE 2: Machine operation

MODULE 3: Introduction to welding operation

MODULE 4: Training for welder certification

MODULE 5: Training for welder in Aviation & Aerospace



CERTIFICATION

DIN EN ISO 14732:2013-12

AWS C7.4/C7.4M:2017

AWS D14.6/D14.6M:2012

AWS D17.1/D17.1M:2017



ENGINEERING SUPPORT

Welding procedure development (WPS / WPQR)



DSI TOTAL SOLUTION for **PULSE LASER WELDING** with **DSI LASER WIRES**



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