

ROFIN PWS

**Laser Welding System –
Welding of Tubes and Profiles.**



THE POWER OF LIGHT

THE PRODUCT

Highest Reliability with Full Flexibility

Robust and reliable laser welding of tubes and profiles – the Profile Welding System (PWS) offered by ROFIN is a complete laser welding system with an integrated process sensor. The “Weld Sensor” allows the operator to monitor the welding process and the integrated controller corrects the welding position automatically. Precision linear actuators position the laser beam within a few μm of the seam gap while achieving welding speeds of up to 60 m/min.

The operator control panel offers clear and easy operation of all important system features. System parameters and functions like laser power or gap monitoring at the workpiece can be centrally set and controlled.

The modular design of the PWS system allows simple integration into an existing machine setup and can be adapted to meet specific customer needs.

In the cases where flexible operation at different welding stations is required, ROFIN offers with the PWSflex a mobile system.



ROFIN PWS

THE TECHNOLOGY

Efficiency by Proven Technology

The PWS can be operated with ROFIN's diffusion-cooled CO₂ Slab lasers or its highly-brilliant Fiber lasers.

The highly-efficient CO₂ Slab lasers with up to 8 kW output power and an excellent beam quality of $K = 0.95$ are the first choice for highest welding speeds. These extremely durable lasers operate with only a few longlife components and do not need conventional gas recirculation, which leads to a considerable reduction in maintenance. The gas consumption is also minimized. For applications that require larger weld seam

widths, a modification of the beam characteristic with a so called "DONUT"-Mode is available as an option.

The highly-brilliant fiber lasers out of ROFIN's FL Series are the ideal addition to the well proven Slab lasers and are suited for the welding of thinnest materials up to medium wall thicknesses. The use of different fiber optics and focusing components allows the adaption of the focal geometry to the intended application. The fiber lasers of the FL Series offer high efficiency, long inspection intervals and high welding speeds.



THE BENEFIT

Precise, Flexible and Efficient

- μm -accurate welding thanks to the high positioning accuracy of the laser beam even at high process speeds of up to 60 m/min
- Seam tracking sensors – Automatic adjustment of the laser beam to the welding gap. Process safe welding with the "Weld Sensor"
- PWS is virtually maintenance-free and is not sensitive to oil, dirt, dust, damp and electrical interference – the best prerequisites for use in tough industrial environments
- Standardized interfaces and compact dimensions provide an easy integration into new or already existing systems
- Customer-specific or system-dependent adjustments possible without any problems



The Profile Welding System guarantees excellent results...

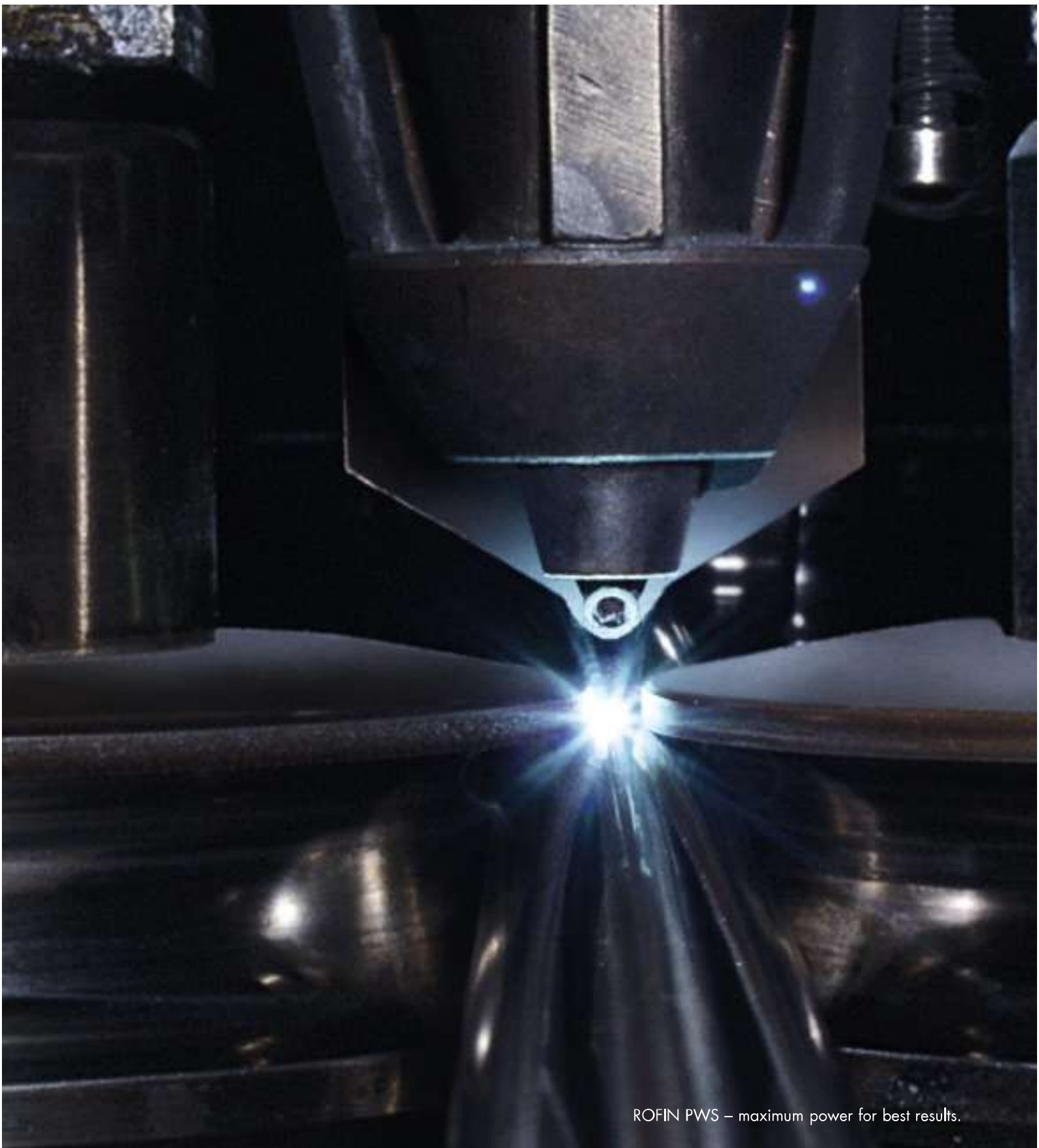


...when laser welding tubes and profiles.



The welded seams withstand even very high stress levels.





ROFIN PWS – maximum power for best results.



We are where you are!

ROFIN has sales and service teams in 40 countries around the world. From planning through implementation, to fast and reliable service - our staff members are available in every phase of your project.

To learn more about the various locations of ROFIN, visit us at

www.rofin.com/worldwide



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