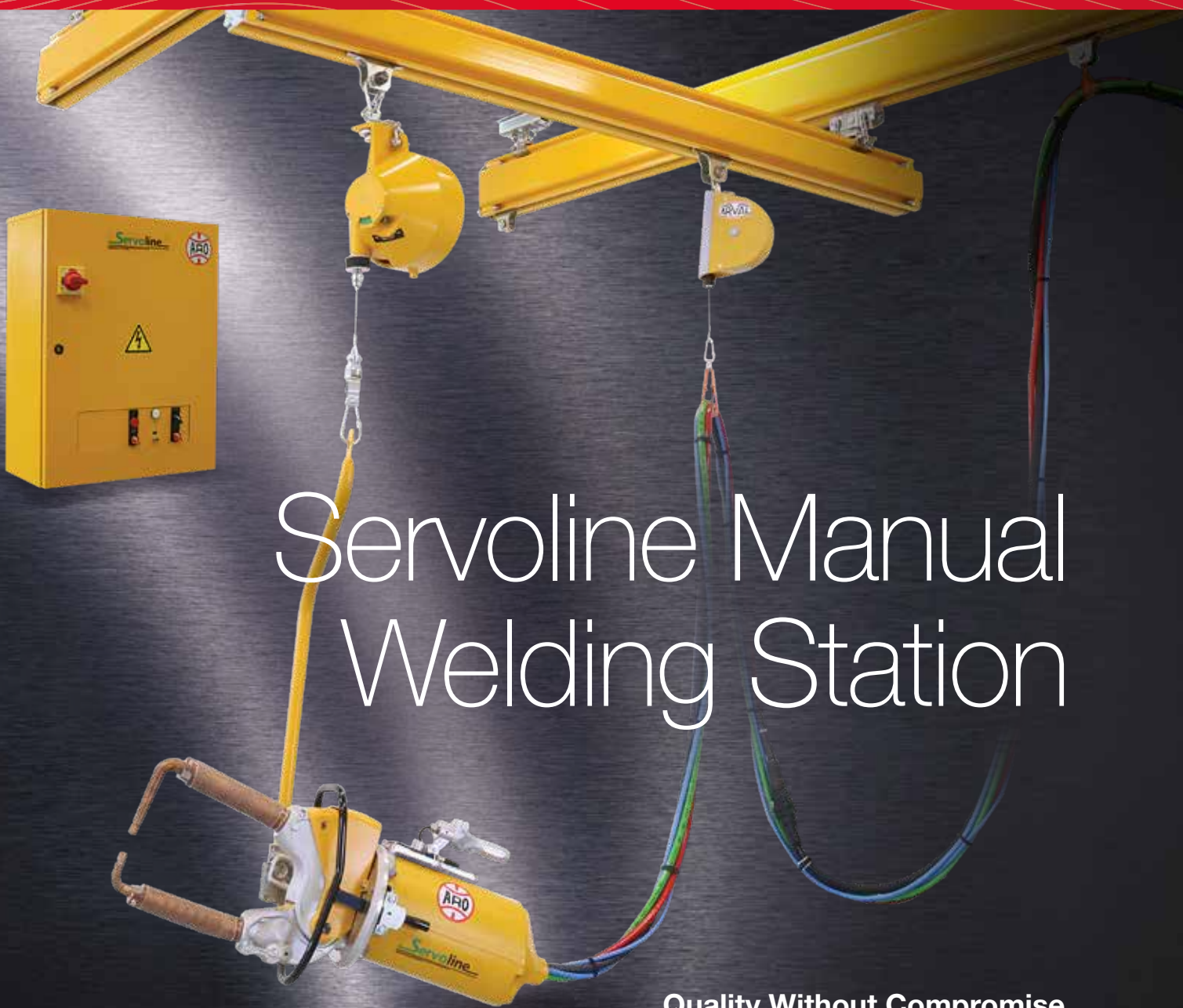




WELDING TECHNOLOGIES



Servoline Manual Welding Station

Quality Without Compromise

About

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For over 70 years, the name ARO has been associated with resistance welding. Today, the ARO Welding Technologies Group is recognized as a world leader in welding equipment and systems for the automotive industry and other industrial markets. Through innovative technologies, ARO provides reliable welding solutions that perfectly match customer requirements, while reducing the overall cost of ownership.

From its head offices in Montval-sur-Loir, near Le Mans in France, and through its network of subsidiaries, branches and production sites across Europe, the Americas and Asia, ARO Welding Technologies maintains a global presence to serve international customers.

ARO is owned by the British industrial group Langley Holdings PLC.



ARO headquarters, Montval-sur-Loir, France

Manual Welding

Despite the advances in robotic welding, manual welding is still very widely used in many industries for the assembly of small production runs or prototypes, as well as for mass production in many countries where limiting CAPEX is of utmost importance. To optimally respond to these requirements, ARO has launched Servoline, a new and innovative manual welding station concept that is set to redefine market standards.



Servoline

Concept

Servoline is a revolutionary manual welding station that incorporates cutting-edge servo technology. This remarkable paradigm shift takes manual welding to performance levels that were previously only possible with robotic applications, while cutting costs by eliminating compressed air.

Servoline is a turnkey concept that incorporates the most recent ARO innovations for unparalleled weld quality. Workstation ergonomics have also been optimized to improve and facilitate the work of operators.

To cater for all requirements, the Servoline range comprises several models of extremely compact welding guns controlled by a new dedicated adaptive control system. The gun body is fully enclosed with reinforced suspension components to make the welding application safer.

With such advantages, Servoline opens the door to new perspectives in manual welding to tackle the technical and economic challenges of the marketplace. This new concept is the culmination of several years of R&D and major investments in design and tooling.

Servoline is a turnkey concept that incorporates the most recent ARO innovations for unparalleled weld quality



Servoline welding station



« X » type Servoline Gun



« C » type Servoline Gun

Key features

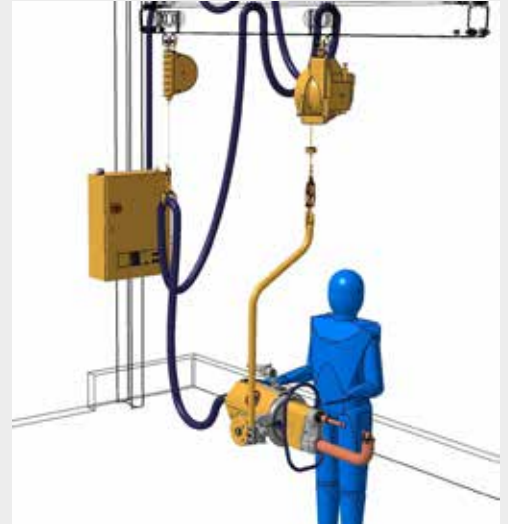
The size and weight of the guns have been drastically reduced to improve workstation ergonomics

'Plug & Weld' station

Servoline comes ready to use. Each station is factory-calibrated and preconfigured in adaptive mode. A station can be up and running in less than 15 minutes!

It consists of:

- 1 welding gun
- 1 harness
- 1 spring balancer for the gun
- 1 retractor for the harness
- 1 welding cabinet with water panel
- Suspension rails (optional)



Servoline welding station

High-Performance and Ergonomic Welding Guns

Servoline is based on a range of five gun models with MFDC transformers to satisfy all manual welding requirements. Its Servo technology provides larger and adjustable strokes with more precise clamping forces, eliminating impacts and providing improved force repeatability. Thanks to a completely new design, the size and weight of the guns have been drastically reduced to improve workstation ergonomics.



CMS welding gun



CZS welding gun



XMS welding gun



XPS welding gun



XZS welding gun

Adaptive Welding

The welding controller, entirely designed by ARO, controls both the motor and the transformer of the gun. It incorporates the latest advances in adaptive welding, which automatically compensates for process variations to provide the best possible weld quality in all operating conditions.



Thanks to an integrated web server, welding parameters and data can be accessed via an extremely intuitive interface, using a license-free Bluetooth connection from any device (touch-pad, laptop or smartphone). A new 8-kHz residual current device optimizes operator safety.



New Spring Balancers

To guarantee best-in-class ergonomics, the station includes the latest generation of ARVAL spring balancers. They are robust and reliable, with suitable load ranges and an optional load indicator that gives an immediate warning if overloaded.



ARVAL spring balancer with visual load indicator

A wide range of accessories are available to further optimize workstation ergonomics

Extensive Range of Accessories

A wide range of accessories are available to further optimize workstation ergonomics:

- Hand wheel for improved grip and more precise movement
- Additional control handle to make welding easier regardless of weld gun orientation
- Suspension rod and gyroscope circle indexing kits to hold the weld gun in position



Hand wheel



Control handle



Gyro circle and suspension rod indexing

Benefits

Servoline offers far reaching benefits that redefine manual welding

Reduced Capital Costs

- Substantial infrastructure savings by eliminating the need for compressed air
- 50% fewer spare parts compared to pneumatic technology



Fast Start-Up

- One supplier: no more compatibility problems
- 'Plug & Weld' thanks to factory pre-setting
- Easy access to welding parameters and data through a user-friendly wireless (Bluetooth) HMI

Optimum Weld Quality

- The Adaptive control system automatically compensates for process variations
- Greater force repeatability thanks to servo technology (like in robotics)
- Soft impact on workpieces





Reduced Operating Costs

- No compressed air: reduced power consumption, less maintenance
- Reduced electrode wear (~20%) and tip dresser wear thanks to soft impact
- No maintenance on the actuator for 7.5 million cycles or 3 years
- Low maintenance costs (no cylinder seals, valves, solenoid valves or filters)
- Downtime is greatly reduced thanks to high actuator reliability, fewer components and (removable) welding gun covers
- A single point of contact streamlines troubleshooting, support, and training when needed

Environment, Ergonomics & Safety

- Low carbon footprint
- Elimination of contaminated aerosols exhausted by air valves
- Noise pollution reduction: acoustic pressure divided by 2.5
- More compact and lighter weldgun bodies, which greatly improves workstation ergonomics (especially with long gun arms)
- Fast and vibration-free: reduced risks of operator's MusculoSkeletal Disorders (MSDs) caused by impacting
- Larger and easily adjustable strokes optimize trajectories for operator comfort
- Lower mishandling risks: 1 button = 1 action
- Extensive range of accessories

ARO provides support and guidance from the very beginning of your project

Turnkey Solution

ARO provides support and guidance from the very beginning of your project. You have a single point of contact who oversees your equipment, from design to delivery on site. ARO can commission your installation wherever you are in the world so that you can get your production up and running in the best possible conditions. Training is also provided to improve technological proficiency and make full use of the equipment's capabilities.





WELDING TECHNOLOGIES

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