



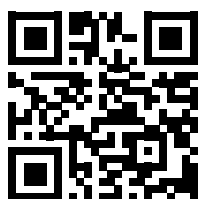
Valentek *S.r.l.*

Automation Solutions

*The ideal solution for automated,
efficient, safe, and high-quality welding*



Valentek stands out for the premium quality of its products engineered with durable materials and cutting-edge technologies and distinguishes itself through the high flexibility of its services.



www.valentek.it

COMPANY PROFILE

Valentek S.r.l. is the experience that innovates automated welding. Founded by a team of professionals with over 25 years of experience in the industrial automation sector, **Valentek S.r.l.** is a dynamic company that blends invaluable technical know-how with a constant drive toward technological innovation.

Our mission is to transform our clients' manufacturing challenges into concrete solutions, engineering systems that guarantee the highest levels of efficiency, precision, and flexibility. We do not just supply machinery; we build long-lasting partnerships based on quality and reliability.



VALENTEK: The efficiency that welds the future: safe, sustainable, automated.

THE VALUE OF CHOOSING VALENTEK

- **Consolidated Know-How:** A technical heritage of over two decades applied to modern market challenges.
- **Tailored Engineering:** Design and development of customized solutions, tailored to the actual needs of the client.
- **Technological Vanguard:** Integration of the most advanced control and digitalization standards.
- **Specialized Service:** Qualified technical assistance and constantly updated personnel.
- **Safety and Sustainability:** Systems engineered in strict compliance with regulations, optimizing resource and energy consumption.

A GLOBAL BENCHMARK

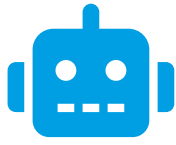
Thanks to a proven track record in the field of revamping and retrofitting existing systems, Valentek has established itself as a cross-industry benchmark across various industrial sectors. From initial consulting to commissioning, every intervention aims at a clear goal: optimizing duty cycles to maximize productivity.

Choosing Valentek means investing in safe, efficient systems ready for the challenges of Industry 5.0, where the excellence of the welded joint meets manufacturing process sustainability.

Efficient, safe, and sustainable solutions for every automated welding need.

SUPPLY AND INSTALLATION OF:

In a global market that demands efficiency and competitiveness, **Valentek** solutions optimize production cycles, drastically reduce downtime, and guarantee consistent welding quality, protecting the value of your investment over time.



Welding automation systems



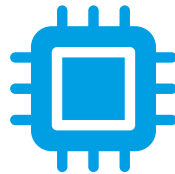
Welding system components



Welding vision and control systems



Radio remote control systems



Industry 5.0 automated management interfaces



Bespoke automated systems

VALENTEK SERVICES:

Automation does not end with installation. **While others stop at the sale, Valentek maximizes your investment with specialized service**, structural revamping, and emergency interventions—ensuring your welding line remains high-performing, safe, and technologically advanced, year after year.



Automated welding system revamping



Scheduled and extraordinary maintenance



Emergency breakdown service



Safe equipment relocation

Technological Revamping: Don't replace—evolve. We upgrade your existing systems to bring them up to current production standards. Revamping is a **sustainable and cost-effective choice**, delivering “new machine” performance on a structure that is already amortized.



Strategic Maintenance: Scheduled interventions designed to eliminate unexpected downtime and preserve mechanical precision.

Emergency Intervention & Safety: Specialized personnel for rapid troubleshooting and completely safe equipment relocation, minimizing operational risks.

LS LONGITUDINAL SEAM WELDERS

Technological evolution, millimetric precision, and bespoke customization

The LS series is the result of multi-year experience dedicated to innovation in automation processes. Specifically engineered for the longitudinal welding of shells and metal sheets, the LS series represents the benchmark for companies requiring high precision, operational reliability, and absolute repeatability, even in the most challenging applications.

Smooth Movement and Structural Stability

Valentek mechanics are synonymous with solidity and zero vibrations:

- **Hardened and Ground Guides:** Linear movement on recirculating ball systems for smooth control.
- **Advanced Mobile Carriage:** Torch support with vertical pneumatic release and manual cross-slide for micrometric adjustments.
- **Anti-Vibration Design:** Structure engineered to reduce tolerances and maximize weld bead stability.



Can be combined with WF4R



Can be combined with AVC



Quality Engineering for Superior Performance

The technological heart of the LS range integrates components of excellence to ensure operational continuity:

- **Copper-Chromium-Zirconium Support Bar:** Engineered to withstand wear and the most intense thermal stresses.
- **Bronze Alloy Clamping Fingers:** Ensure uniform and secure clamping, preventing even the slightest material deformation.
- **Integrated Cooling:** An advanced system to preserve the integrity of the bar and extend its service life.



Standard LS Models

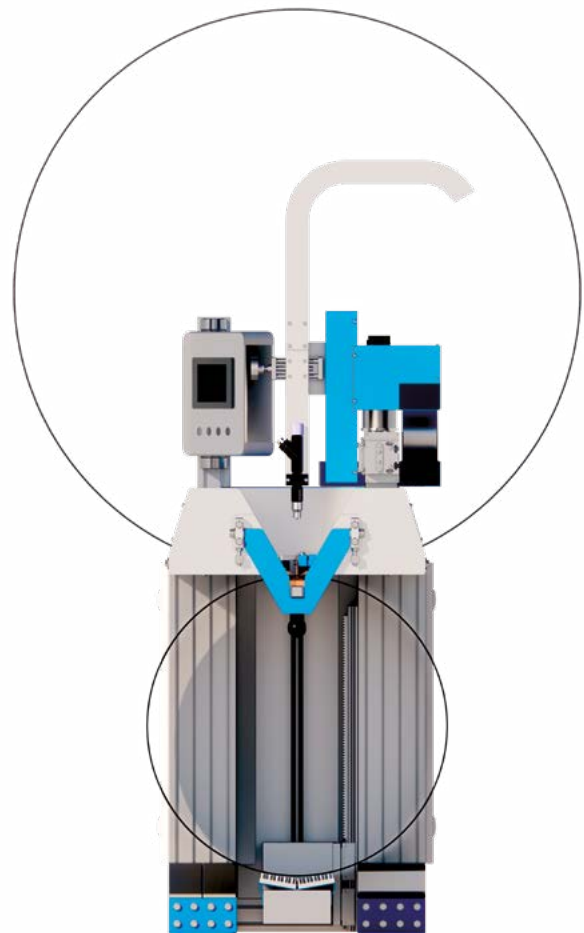
The base version for flat sheets and cylinders/shells, equipped with Numerical Control. Automated step-cycle management reduces loading/unloading times and minimizes human error.

- **Total Synchronization:** Beam with motorized torch carriage for constant speed management.
- **Optional Automation:** Motorized lifter for assisted edge alignment, boosting plant productivity.



LSC Models (Combined)

For the internal welding of large-diameter shells.



Other Specialized LS Models

- **LSI (Flat):** Optimized for the joining of large-sized flat sheets.
- **LSV (Vertical):** The ideal solution for welding shells in a vertical position.
- **LSR (Elevating):** Adjustable loading/unloading height for maximum operational ergonomics.
- **LSA (Automatic):** Fully integrated cycle: alignment, clamping, welding, and unloading without manual intervention.

Technical features - LS Standard

Models	LS525	LS1050	LS1550	LS2050	LS2550	LS3050
Weldable length (mm)	525	1050	1550	2050	2550	3050
External weldable diameters (mm)	60÷800	80÷800	110÷800	150÷800	240÷800	240÷800
THICKNESSES (mm)	0,5÷5	0,5÷5	0,5÷5	1÷8	1÷8	1÷8
Applicable welding processes	MIG/MAG-TIG-PLASMA-SAW					
Hook actuation on bar support	Manual			Pneumatic		
Semi-automatic cycle function	YES	YES	YES	YES	YES	YES

Standard LS Accessories

Models	LS525	LS1050	LS1550	LS2050	LS2550	LS3050
Motorized lifter	☒	☒	☒	☒	☒	☒
Height extension option	Not applicable			☒	☒	☒
Non-magnetic bar support option	☒	☒	☒	☒	Not applicable	
Manual adjustable shell stop	☒	☒	☒	☒	☒	☒
Bar cooling unit	☒	☒	☒	☒	☒	☒
Chiller for bar cooling during heavy-duty cycles	☒	☒	☒	☒	☒	☒
Upper weld protection shoe	☒	☒	☒	☒	☒	☒
Lower weld gas shielding input	☒	☒	☒	☒	☒	☒
Cold wire feed unit	☒	☒	☒	☒	☒	☒
AVC Kit	Not applicable			☒	☒	☒
LED pointer for tack-welded shells	☒	☒	☒	☒	☒	☒

INDUSTRY VERSATILITY AND “NON-STANDARD” CUSTOMIZATION

Beyond the Standard: Our engineering department goes beyond the catalog. We design fully customized solutions developed to solve unique application challenges and non-standard geometries, while maintaining the engineering approach that distinguishes the Valentek brand.

Technical features - LSC (Combined)

Models	LSC1550	LSC2050	LSC2550	LSC3050	LSC4100	LSC5100
Weldable length (mm)	1550	2050	2550	3050	4100	5100
External weldable diameters (mm)	110÷800	150÷800	240÷800	240÷800	350÷1000	500÷1000
Internal min weldable diameters (mm)	1300	1300	1300	1500	1500	1500
THICKNESSES (mm)	1÷8	1÷8	1÷8	2÷15	2÷15	2÷15
Applicable welding processes	MIG/MAG-TIG-PLASMA-SAW					
Hook actuation on bar support	Manual	Pneumatic				
Semi-automatic cycle function	YES	YES	YES	YES	YES	YES

LSC (Combined) Accessories

Models	LSC1550	LSC2050	LSC2550	LSC3050	LSC4100	LSC5100
Motorized lifter	☑	☑	☑	☑	☑	☑
Height extension option	☑	☑	☑	☑	☑	☑
Non-magnetic bar support option	☑	☑	Not applicable			
Manual adjustable shell stop	☑	☑	☑	☑	☑	☑
Bar cooling unit	☑	☑	☑	☑	☑	☑
Chiller for bar cooling during heavy-duty cycles	☑	☑	☑	☑	☑	☑
Upper weld protection shoe	☑	☑	☑	☑	☑	☑
Lower weld gas shielding input	☑	☑	☑	☑	☑	☑
Cold wire feed unit	☑	☑	☑	☑	☑	☑
AVC Kit	☑	☑	☑	☑	☑	☑
LED pointer for tack-welded shells	☑	☑	☑	☑	☑	☑
Shell supports for external welding	☑	☑	☑	☑	☑	☑
Revolver bar support	☑	☑	☑	☑	Not applicable	
Releasable bar support	☑	☑	☑	☑	☑	☑

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CP 2.0 CIRCULAR WELDING POSITIONERS

Advanced automation for perfect structural joints and uniform finishes

The Valentek CP range represents the cutting-edge solution for automated circumferential welding of cylindrical, tubular, and hollow components. Designed to satisfy the most demanding industrial sectors, the CP series ensures top-quality joints, a flawless aesthetic finish, and process continuity that eliminates the typical criticalities of manual welding.

Thanks to the integration of MIG/MAG, TIG, PLASMA, and SAW technologies, CP systems guarantee superior mechanical resistance and perfectly repeatable results, optimizing production times even on large batches.



Rotational Precision and Structural Reliability

The mechanics of the CP range are designed to operate under dynamic load conditions, guaranteeing millimetric stability:

- **Consistent Quality:** Continuous circumferential welding with a homogeneous finish along the entire perimeter.
- **High-Precision Rotation:** Smooth and controlled movements for perfectly centered, defect-free joints.
- **Robust Architecture:** Oversized structures ideal for processing pipes, flanges, tanks, dished ends, and pressure components.
- **Solidity:** Systems suitable for applications subject to mechanical stress, vibrations, and high pressures.

Intelligent Control and Smart Factory

The electronic brain of CP positioners transforms welding into a data-driven process:

- **Advanced PLC & NC:** Complete cycle management through latest-generation numerical controls.
- **Absolute Repeatability:** Guarantee of consistent quality from the first to the last piece of the batch.
- **Total Digitalization:** Complete traceability of process parameters and pre-arrangement for smart factory systems.
- **Remote Service:** Integrated remote assistance module for real-time technical support.

CP Standard Models

The pillar of the range for linear and precise processing.

- **Fixed head configuration** with motorized rotation.
- **Axially movable tailstock** to adapt to different lengths.
- **Upper beam with axially sliding welding head** for rapid positioning.

CP DH Models

Double Head Version

Maximum flexibility on complex components.

- **Two axially movable heads: one motorized and one idle.**
- **Fixed central lifter** to ease loading, positioning, and component support.
- **Beam with movable welding head** to cover the entire working area.



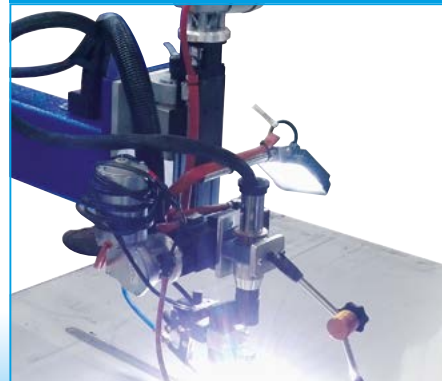
Can be combined with WF4R



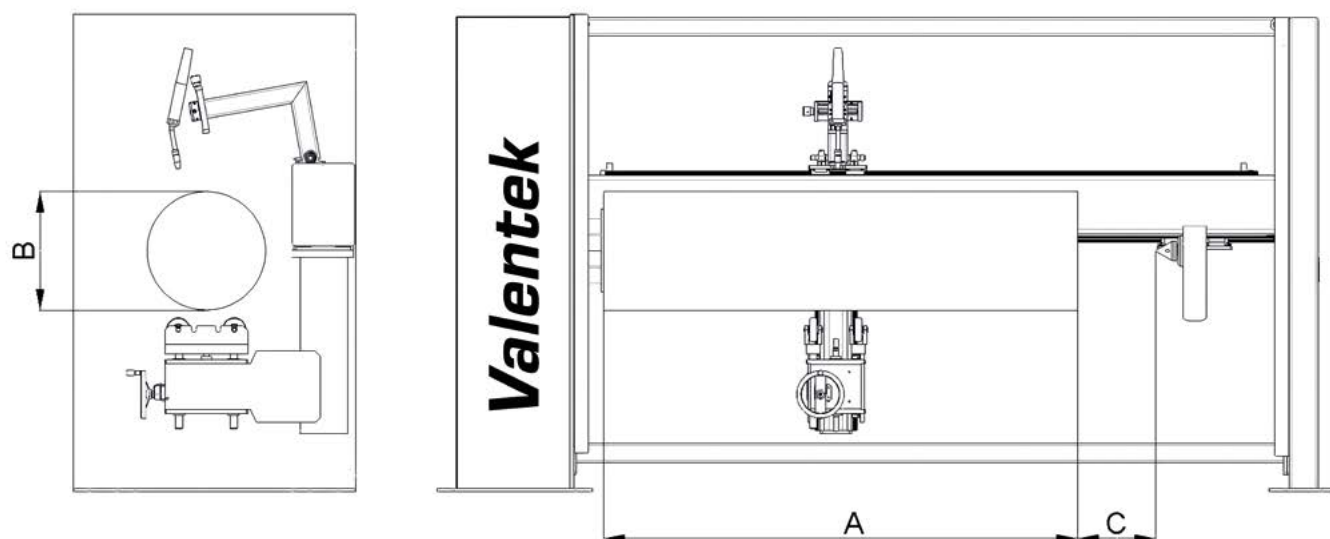
Can be combined with OSCILLATOR



Can be combined with AVC



Technical features CP 2.0



Model	CP500	CP1000	CP1500	CP2000	CP2500	CP3000
A) Useful welding length (mm)	500	1000	1500	2000	2500	3000
B) External weldable diameters (mm)	50÷600					
C) Tailstock release stroke (mm)	150	150	150	200	200	200
Load capacity (kg)	300	300	300	400	400	500
Applicable welding processes	MIG/MAG-TIG-PLASMA-SAW					

CP 2.0 Accessories

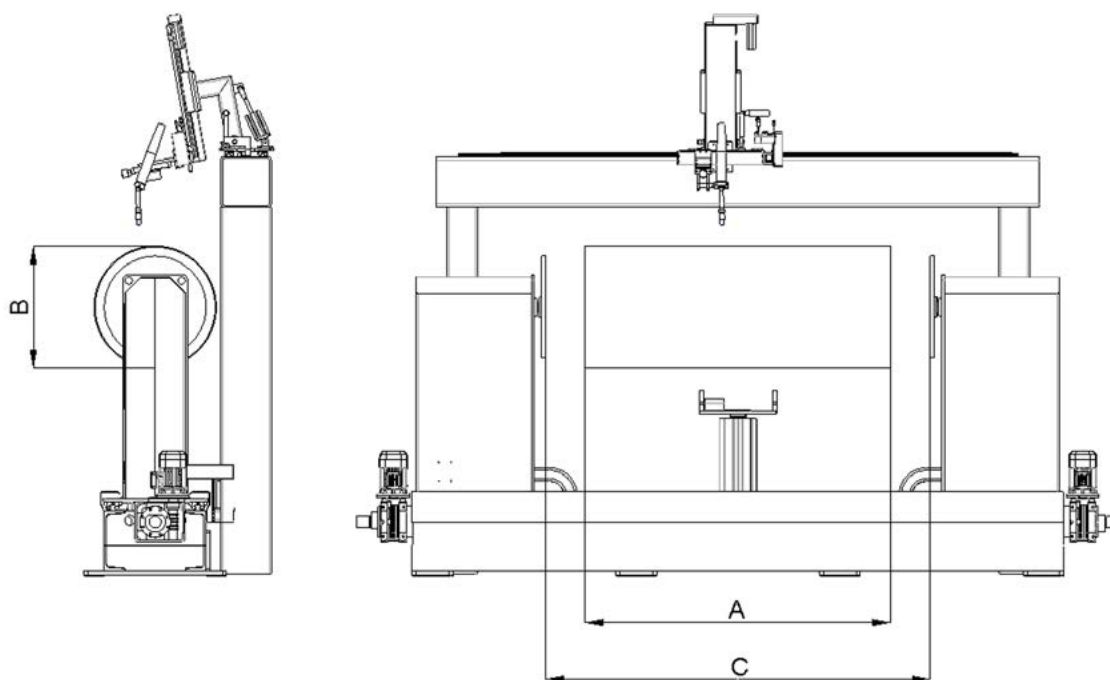
- Adjustable lift with handwheel and pneumatic release
- Adjustable double lift with handwheels and pneumatic release (not applicable to CP500)
- Second torch carriage
- Motorised vertical slide, 300 mm stroke
- Motorised horizontal slide, 200 mm stroke
- Motorised torch carriage movement
- 3-jaw self-centring chuck *
- Upper welding protection shoe
- WF4R cold wire kit
- 2-axis probe tracker
- 2-axis laser tracker
- AVC kit
- 50 mm electronic oscillator
- 1-head flux recovery system
- 2-head flux recovery system
- LED pointer

* Note: fitting the spindle reduces the effective length of the system

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Technical features CP DH



Model	CP1500DH	CP2000DH	CP3000DH	CP4000DH	CP5000DH	CP6000DH
A) Lunghezza utile saldatura (mm)	1500	2000	3000	4000	5000	6000
B) Diametri saldabili estern. (mm)	50÷600					
C) Corsa svincolo contropunta (mm)	1900	2400	3400	4400	5400	6400
Portata (kg)	300	400	500	800	800	800
Procedimenti di saldatura applicabili	MIG/MAG-TIG-PLASMA-SAW					

CP DH Accessories

- Second torch carriage
- Motorised vertical slide, stroke 300 mm
- Motorised horizontal slide, stroke 200 mm
- Motorised torch carriage movement
- 3-jaw self-centring chuck *
- Upper welding protection shoe
- WF4R cold wire kit
- 2-axis probe tracker
- 2-axis laser tracker
- AVC kit
- 50 mm electronic oscillator
- 1-head flux recovery system
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CB CARTESIAN MANIPULATORS

Millimetric stability and control for welding automation

Valentek CB series manipulators are designed for automated welding applications requiring flawless positioning and absolute stability. The controlled movement of the boom along the vertical and horizontal axes guarantees consistent quality joints, making these systems the heartbeat of intensive production lines and large-scale component manufacturing.

Precision Architecture and Mechanics

The CB series is built to withstand time and mechanical stress:

- **Rotating Column:** Electrowelded box-type structure on preloaded ball-bearing slewing ring. **Allows 360° rotation** with micrometric locking in any position.
- **High-Rigidity Boom:** Smooth sliding on hardened and ground guides to eliminate vibrations and deflections during welding.
- **Reinforced Carriage:** Made of electrowelded steel, it houses the recirculating ball pads for fluid and precise movement.

Safety and Smart Movement

- **Anti-Fall System:** Integrated mechanical safety device that triggers instantly in the event of anomalies in the kinematic chain.
- **Irreversible Lifting:** Driven by self-braking motors and worm gear reducers to ensure position retention even in the absence of power.
- **Variable Speeds:** Infinitely adjustable travel speed (0.2 – 2 m/min) with rapid positioning that does not interfere with the set welding parameters.

Modularity and Layout

To adapt to any workshop, the CB system is available with three different bases:

1. **Fixed Base:** Floor anchoring for dedicated workstations.
2. **Manual Push Mobile Base:** On rail track with manual locking system.
3. **Motorized Base:** Rail track travel at variable speed (0.2 – 4.5 m/min) to cover large working areas.

Configurations and Versions of the CB Range

CBL – Light Version (TIG/Plasma Precision)

Optimized for technologies requiring maximum accuracy. The recirculating ball screw/nut system guarantees smooth, backlash-free movements, ideal for high-quality TIG and Plasma welding.

CBH – Heavy Version (SAW Power & Multi-process)

Designed for heavy loads and submerged arc welding (SAW). The reinforced structure allows for a full-option setup, supporting heavy power sources, flux recovery systems, and advanced automation accessories.

Model	CB Standard	CBH (Heavy)
Ideal Application	TIG / PLASMA / Micro-Plasma	SAW (Submerged Arc Welding) / Multi-process
Lifting Technology	Recirculating ball screw	Chain and counterweight (or Ball screw)
Movement Precision	Centesimal (backlash-free)	High (stability for heavy loads)
Column Rotation	360° Manual on slewing ring	360° Manual on reinforced slewing ring
Travel Speed	0.2 – 2.0 m/min	0.2 – 2.0 m/min
Motorized Base Speed	Up to 4.5 m/min	Up to 4.5 m/min
Load Capacity	Optimized for light torches and slides	High (Power sources, Flux recovery, Spools)
Safety	Motor brake + Electrical limit switches	Mechanical anti-fall device + Brake
Industry 4.0 Integration	Ready	Ready

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SYSTEM ACCESSORIES

Motorized linear slides

From 50mm
to 300mm



Manual linear slides

From 50mm
to 300mm



Probe

Proportional tactile seam tracking
sensor



HD Camera

For open-arc
welding vision
for processes:
MIG/MAG - TIG -
PLASMA



WF4R WIRE FEEDER 4 ROLLERS

The best solution for industrial welding

WF4R



General characteristics

Automatic motorized wire drive system, which guarantees precision and flexibility even at very low RPM, thanks to encoder speed control. Modular application for TIG and Plasma welding, with cold wire integration.

Thanks to electronic management via PLC and the Ethernet communication port, **WIRE FEEDER 4 ROLLERS** offers wide interfacing and management capabilities also via PC and Industry 4.0 smart systems (OPTIONAL).

The entire system is designed and built for industrial use and glove interaction, thanks to the "industrial remote control" which eases and speeds up the operator's calibration parameters in the field, without the need to remove gloves.

Technical features

Power supply	230VAC 50Hz
Electrical power cons.	100 W
Wire speed	from 110 to 3560 mm/min
Weight without wire	15 kG
Dimensions (WxHxD)	690x430x260 mm



**Industrial
remote
control**

Cold Wire TIG Welding: New Life for Existing Systems

Valentek retrofitted a welding manipulator in Portugal, transforming an outdated machine into a high-performance automatic system. The project demonstrates how technological revamping can extend the service life of systems, raising final product quality.

Interventions and Technologies

Complete Revamping: New electrical section and full mechanical overhaul.

Cold Wire TIG Welding: Process automation with **WF4R** wire feeder.

Advanced Precision: Integration of the **AVC** (Automatic Voltage Control) system and Oscillator for flawless management of the weld pool.

Advantages

Maximum operational reliability, consistent welding parameters, and latest-generation technology on a consolidated mechanical structure.

Beverage Keg Welding: Efficiency in the Food Sector

Valentek upgraded an existing plant in Spain for the production of beverage kegs. The integration of precision wire feed systems made it possible to elevate joint quality and execution speed in full compliance with industry hygiene standards.

Interventions and Technologies

Technological Upgrade: Integration of **WF4R** (4 rollers) wire feeder onto an existing system.

Objective: Optimization of material deposition and maximum continuity of the welding process.

Advantages

The Result: Greater control of the weld pool, reduction of scrap, and immediate productivity increase without the need to replace the entire system.

AVC Welding

Automatic Voltage Control: Automated welding always under control

General characteristics

It is essentially a system equipped with a motorized recirculating ball screw slide, managed by a PLC control panel, enabling the ultimate in welding quality:

The **AVC system** keeps the welding conditions and torch distance constant to always achieve the best possible automated welding result.

Valentek AVC perfectly interfaces with any type of TIG, PLASMA, or MIG welding power source.



Technical features

Power supply	230VAC 50Hz
Power consumption	100 W
Sensitivity	100 mV
Working voltage	0-100 Vdc
Collision alarm threshold (min-max)	0-100 Vdc
Alarm intervention delay	0-10 s
Sled control box cable (max)	30 m
Maximum sled load	15 kg
Control box weight	10 kg
Control box dimensions LxHxD	400x300x200 mm
Motorised sleds	from 50 to 500 mm

Pre-arrangements

The electronic management provided by Valentek via PLC, thanks to the Ethernet LAN communication port, offers wide interfacing and management capabilities also via PC and Industry 4.0 smart systems (OPTIONAL).

The brain of the system



Can be combined with WF4R



Can be combined with OSCILLATOR



Remote control Optional



Automated welding for the food sector

Valentek built an advanced plant in Veneto (Italy) for the production of fermenters, where joint hygiene and aesthetic precision are fundamental requirements. The solution guarantees flawless welds thanks to the integration of high-precision digital and mechanical technologies.

Technological Highlights

AVC (Automatic Voltage Control): Automatic arc voltage control for constant penetration.

WF4R (Wire Feeder 4 Rollers): 4-roller wire feeder for a smooth feeding of filler material.

Dual-Cam Monitoring: Two HD cameras for simultaneous monitoring of internal and external welding.

Advantages

The operator supervises the process from the control panel in total safety, without protective masks.

Remote vision allows immediate micro-adjustments, eliminating scrap and guaranteeing excellent quality standards.

OSC-L HIGH-PRECISION LINEAR OSCILLATOR

Advanced electronics, digital management with PLC, and top-tier welding



General characteristics

The Valentek OSC-L linear oscillator represents technological excellence in motorized oscillation systems for **TIG and Plasma welding** processes.

Designed to guarantee unparalleled operational flexibility, this modular system integrates perfectly into complex automatic plants, ensuring flawless management of the weld pool even with cold wire feed.

Thanks to its robust structure and high-precision mechanics, the OSC-L allows obtaining weld beads with a superior aesthetic finish and excellent mechanical properties.

Ergonomics and Industrial Usability

The OSC-L has been developed by placing the operator's actual working conditions at the center.

The industrial remote control is specifically designed for immediate interaction: calibration parameters can be adjusted in the field without the need to remove work gloves, speeding up setup operations and improving safety.

The interface relies on a heavy-duty industrial Touch Screen with intuitive graphics that simplify the configuration of oscillation cycles.



Industrial Touch Screen



Smart Integration and Industry 4.0

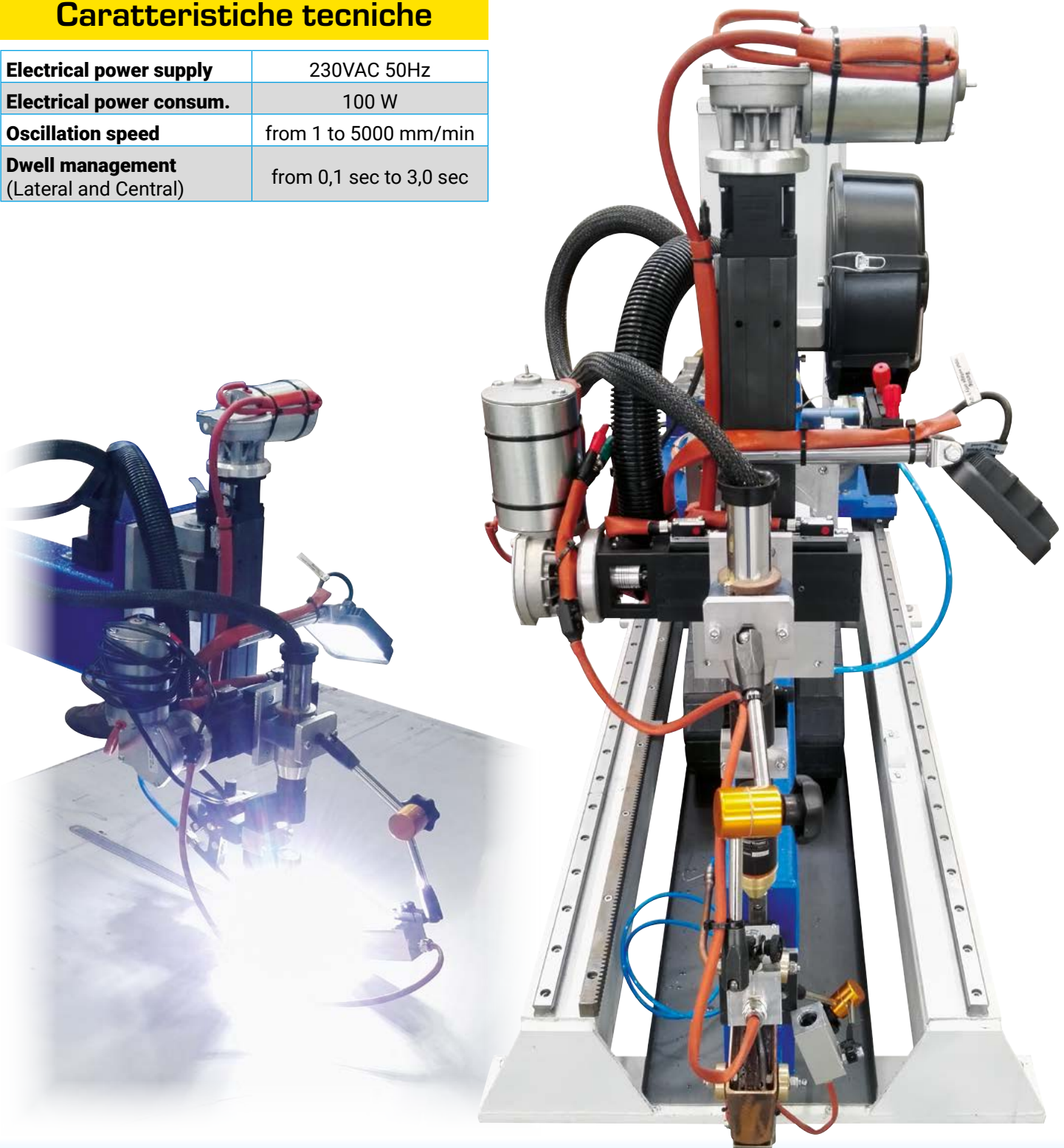
The heart of the system is based on advanced electronic management via PLC. The presence of an integrated Ethernet communication port makes the OSC-L a solution fully compliant with Industry 4.0 paradigms.

The system offers a wide interfacing capacity, allowing data management and monitoring via PC, remote databases, and smart systems.

This architecture allows companies to digitalize manufacturing processes, ensuring traceability and real-time optimization of welding parameters (optional feature).

Caratteristiche tecniche

Electrical power supply	230VAC 50Hz
Electrical power consum.	100 W
Oscillation speed	from 1 to 5000 mm/min
Dwell management (Lateral and Central)	from 0,1 sec to 3,0 sec

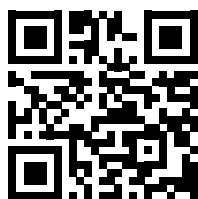




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Valentek stands out for the quality of its products, engineered with durable materials and cutting-edge technologies that are also distinguished by their application flexibility



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