

THE ALL-IN-ONE SYSTEM FOR SUBMERGED ARC WELDING

Uhrhan-Schwill
SCHWEISSTECHNIK
A Lincoln Electric Company

LINCOLN
ELECTRIC
THE WELDING EXPERTS®

**FOR OVER 120 YEARS, KNOWN WORLDWIDE
FOR RELIABILITY AND PERFORMANCE**



2.6	160	11 000	120
BILLION USD REVENUE	ACTIVE IN 160 COUNTRIES WORLDWIDE	EMPLOYEES WORLDWIDE	YEARS OF EXPERIENCE

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**THE ALL-IN-ONE
FOR SUBMERGED A**

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SCHWEISSTECHNIK

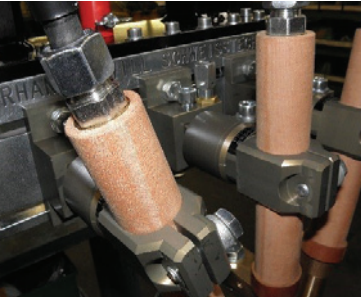
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ONE SYSTEM ARC WELDING

MOVING YOUR SUBMERGED ARC SOLUTION TO THE NEXT LEVEL

...by U&S turnkey welding system E5



E5 SAW Weld Head

- Usable of various kind of welding applications (Outside/Inside/Longitudinal/Circumferential)
- Completely equipped mechanical welding heads including high efficiency wire feed units and motorized cross slide
- Up to 3 electrodes in different executions available (Mono/Twin/E-ESO)
- Possible integration of Laser pointer for manual joint tracking

E5 Digital Controller

- Special developed control system to control the SAW process by one state-of-the art controller with mobile touch panel
- Pre-selection of welding parameters and automatic control of set parameters in real-time
- Automatic heat input control function
- User-friendly environment



Uhrhan & Schwill Power Wave Welding Sources

- State-of-the-art Power Wave technology® with power wave control
- Traceability
- Alarm logging system

DC +

- Most common mode
- Deep penetration and stable arc

DC-

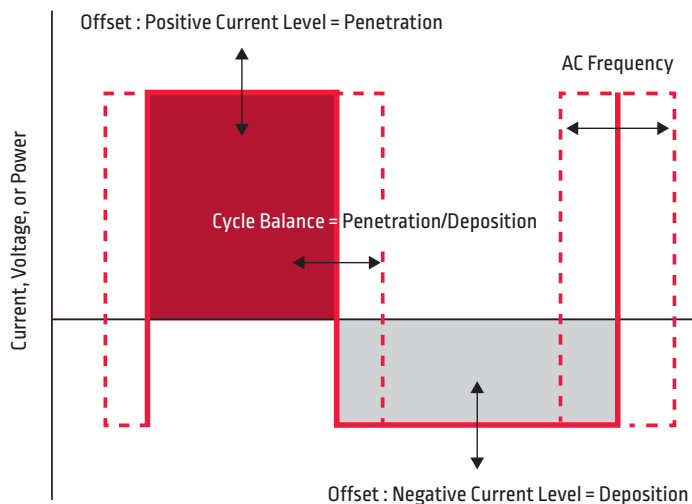
- Improves deposition rate (25%)
- Limits penetration
- Limited arc stability

AC

- A compromise between the two DC modes
- The optimum choice with Power Wave® AC/DC 1000® SD

Waveform Control Technology® capability provides precise control over:

- | | | |
|---|---|---|
| • Frequency
(Number of switch per second from positive to negative polarity) | • Balance
(Percentage of time in the positive polarity portion of one cycle) | • Offset
(Positive/Negative Amplitude) |
|---|---|---|

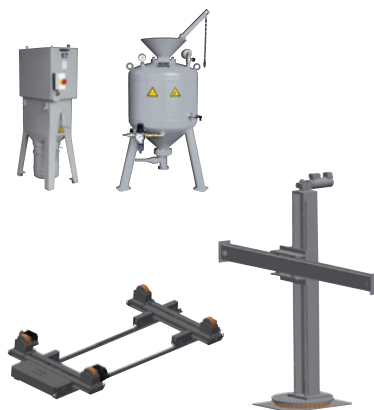


Flux handling components

- Components for flux supply and re-suction process for integration available

Automation

- Column & Boom welding manipulators to obtain up to 8 meter of lift and manual or powered mobile sub-base for varying lengths
- Welding rotators or positioners designed to move the work piece below the welding head



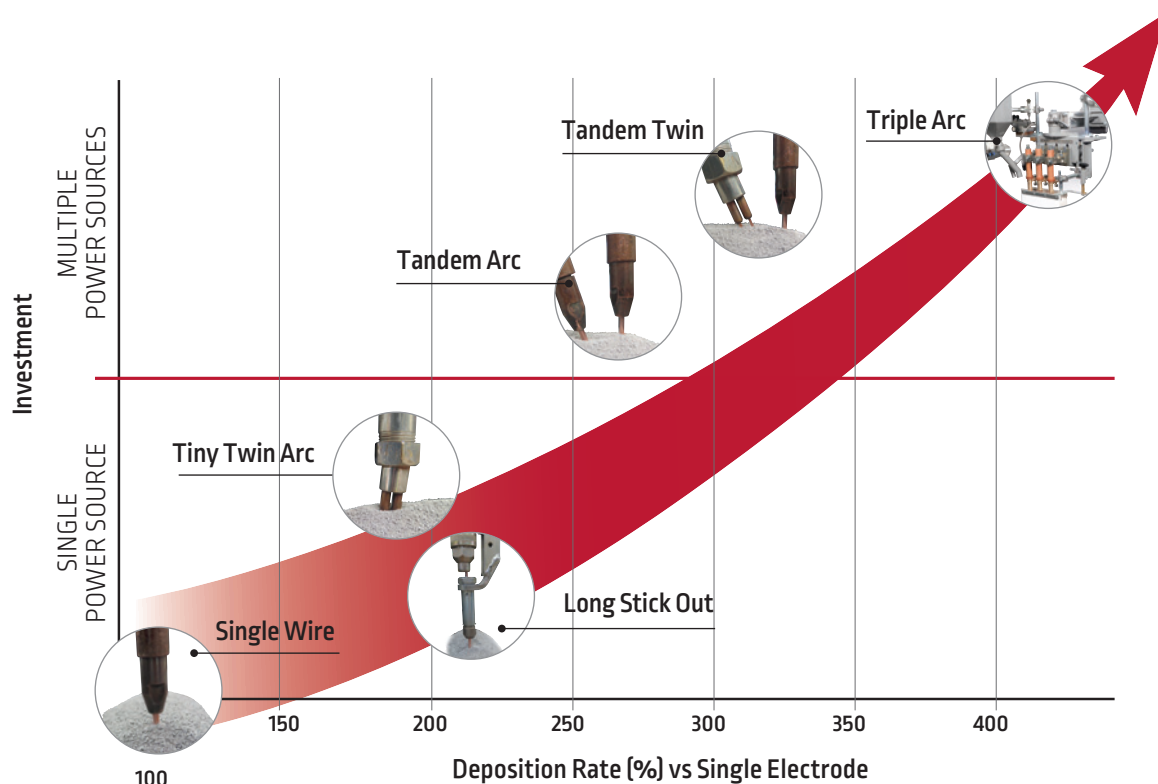
GO FOR THE NEXT STEP

...by advanced welding process solutions

- Different components for flux supply and re-suction process for integration available

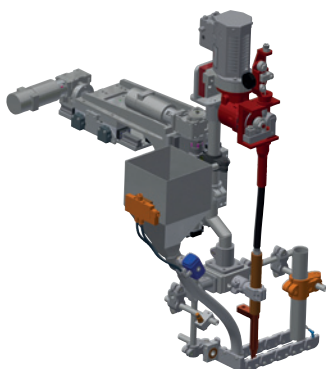
- High quality welding results
- Excellent bead appearance
- Highest deposition rates
- Deep penetration
- Increased productivity

Uhrhan & Schwill is the submerged arc process specialist. Together we will develop the best solution while maximizing your savings through highest deposition rates, highest quality and optimized parameters with your actual equipment and potential investments. Rate yourself on the next graph and let's move together to the next step.

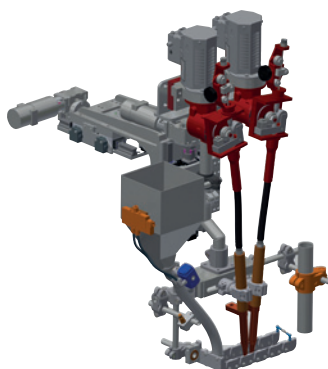


Further improvements possible by implementation of E-ESO or TWIN solution for up to 3-Arc applications in various combinations.

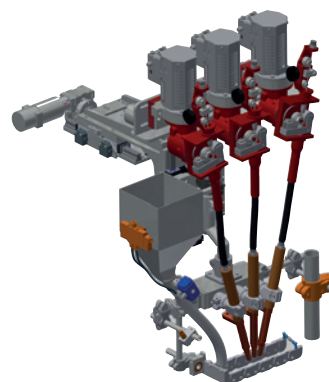
SYSTEM CONFIGURATION



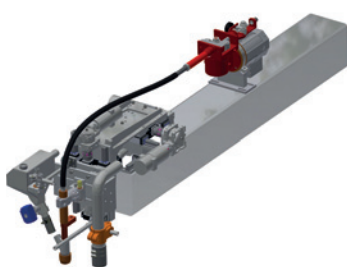
E5 1-Arc outside welding head
(usable for longitudinal and circumferential welding applications)



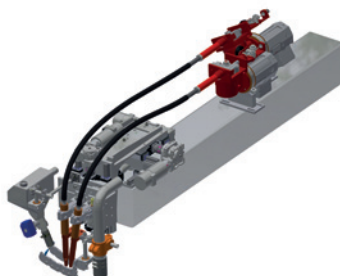
E5 Tandem outside welding head
(usable for longitudinal and circumferential welding applications)



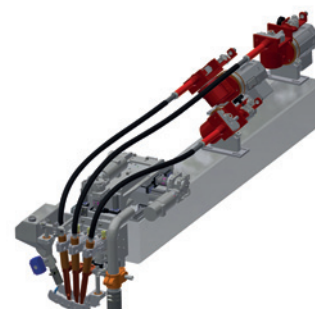
E5 3-Arc outside welding head
(usable for longitudinal and circumferential welding applications)



E5 1-Arc inside welding head
(usable for longitudinal and circumferential welding applications /min. ID-Ø 24")



E5 Tandem inside welding head
(usable for longitudinal and circumferential welding applications /min. ID-Ø 24")



E5 3-Arc inside welding head
(usable for longitudinal and circumferential welding applications /min. ID-Ø 24")



E5 digital controller



**Power Wave®
AC/DC 1000® SD**

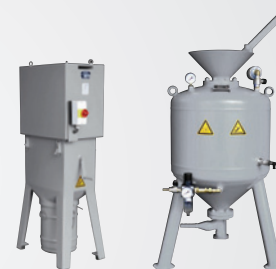
OPTIONS



**Welding rotators
and positioners**

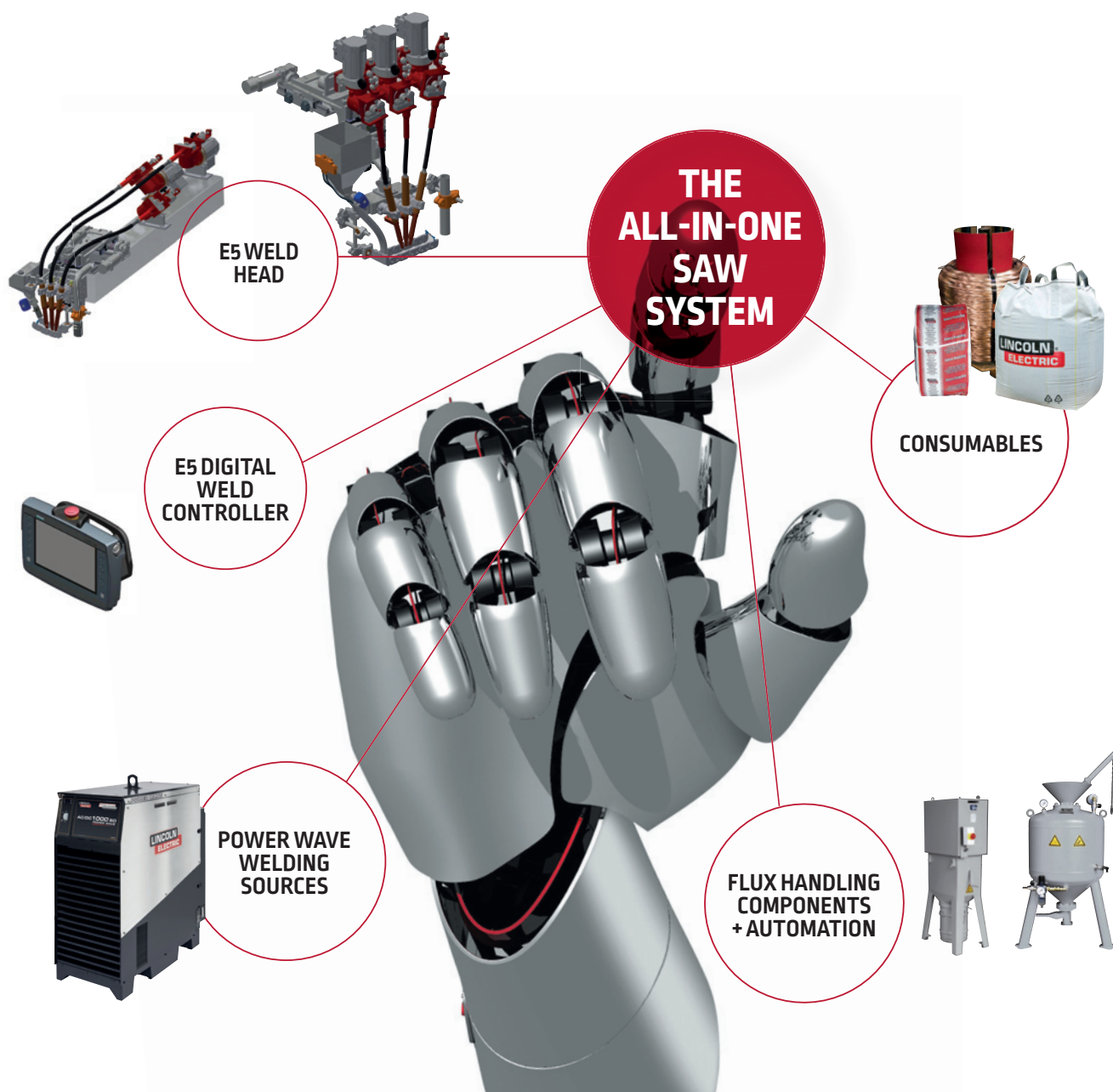


**Column & Boom
welding manipulators**



**Flux handling
components**

THE ALL-IN-ONE SUBMERGED ARC WELDING SYSTEM



SUBMERGED ARC WELDING FOR EVERY INDUSTRY



TECHNICAL EXPERTISE · PRODUCTIVITY SOLUTIONS GLOBAL APPLICATION SUPPORT



CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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