

INCREASE YOUR
DEPOSITION RATE
BY UP TO

50%

HYPERFILL™

**BIGGER WELDS, FASTER WELDS IN SEMI-AUTOMATIC
GMAW WELDING**

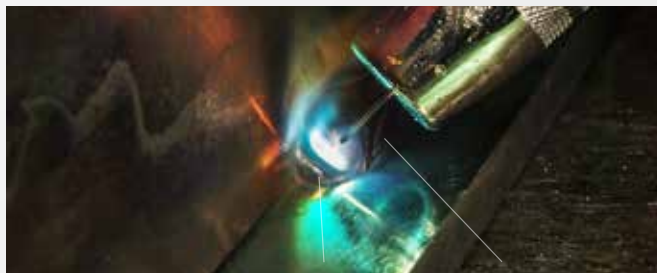
www.lincolnelectriceurope.com

**LINCOLN®
ELECTRIC**

INNOVATIVE TWIN-WIRE DESIGN

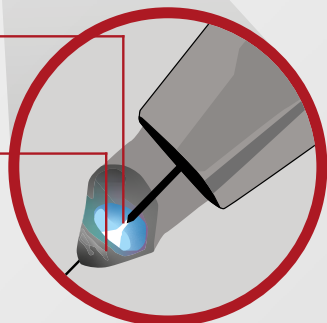
HyperFill™ is a patent pending twin-wire GMAW-P solution that utilizes two electrically conductive wires, energized by a single power source and fed through a single wire feeder, single gun liner and a single tip.

Single Wire



Generates a deep, narrow arc cone

Arc stability deteriorates at higher wire feed speeds making process more difficult to use



HYPERFILL™



Generates a wide, evenly-distributed arc cone

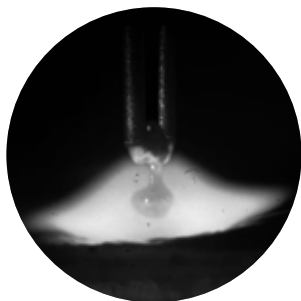
Smooth, stable puddle is more favorable and makes process easy to use at higher deposition rates

USER ADVANTAGES

- Single power source
- Single feeder
- Single gun liner
- Single contact tip
- Single electrical arc

UNIQUE GMAW PROCESS, TWO WIRES A SINGLE ARC

Due to its innovative twin-wire design, HyperFill™ is able to utilize two smaller diameter wires to produce a larger weld droplet and arc cone. In return, this generates a large weld puddle that is easy to manage and control, allowing operators to increase deposition by an average of 50% over traditional single-wire processes.



WIRE ORIENTATION **DOES NOT** AFFECT ARC CHARACTERISTICS IN CONTRARY TO CONVENTIONAL TANDEM SOLUTIONS WITH TWO ARCS



USER ADVANTAGES

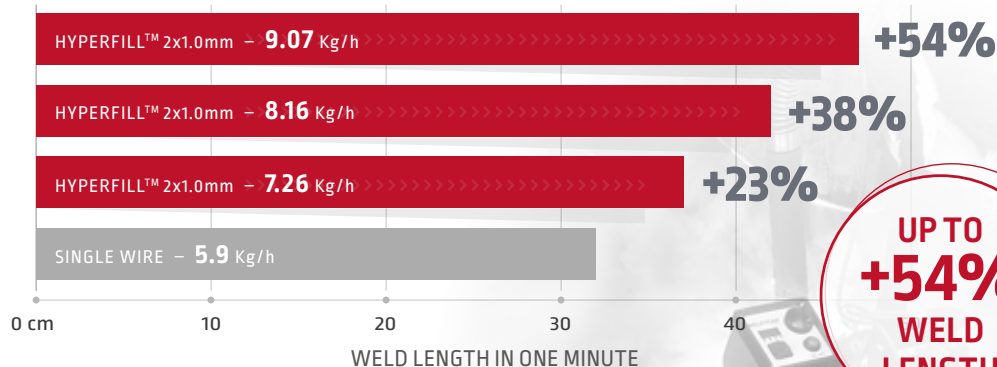
- Higher deposition rate
- Easy molten puddle control
- Comfortable for the welder
- Large beads achievable

INCREASE YOUR EFFICIENCY BY IMPROVING WELDING SPEED OR INCREASING BEAD SIZE

Weld length achievable with HyperFill™ compared to single wire.

HYPERFILL™ EFFECT ON TRAVEL SPEED

Based on 8x8 mm legs size, realized with Power Wave® S500



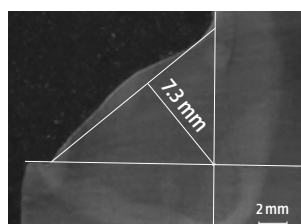
- Extendable to robotic and automatic applications
- Usable with both drums and spools
- Extendable to mechanisation thanks to **WELDYCAR**

USER ADVANTAGES

- Reduce number of passes
- Higher productivity
- Reduced downtime

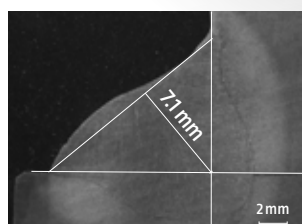
HYPERFILL™ AGAINST THE GRAVITY

PRODUCE LARGER BEADS AT HIGHER SPEED, KEEPING SYMETRIC WELD GEOMETRY IN PB POSITION



HyperFill™

390 A, 33.5 V, Gas: 82%Ar-18%CO₂
30 cm/min, 2.6 kJ/mm



Single wire 1.2 mm CV

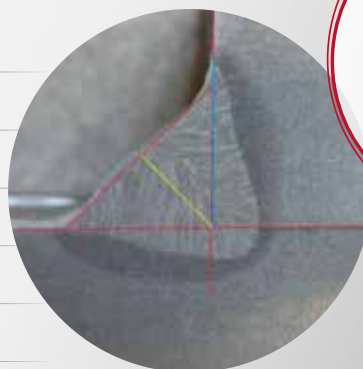
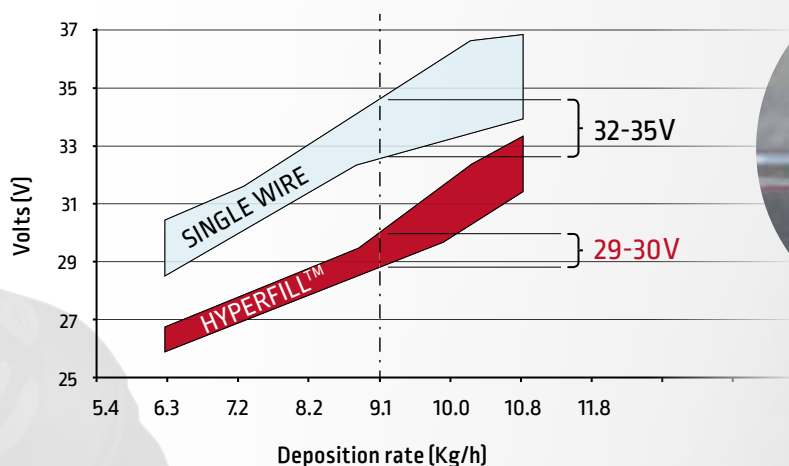
320 A, 31.7 V, Gas: 82%Ar-18%CO₂
22 cm/min, 2.7 kJ/mm

MORE THAN
7mm
THROAT
IN SINGLE
PASS

UP TO
+35%
IN WELDING SPEED
SAME HEAT INPUT
& PENETRATION

REDUCED TENDENCY FOR UNDERCUT

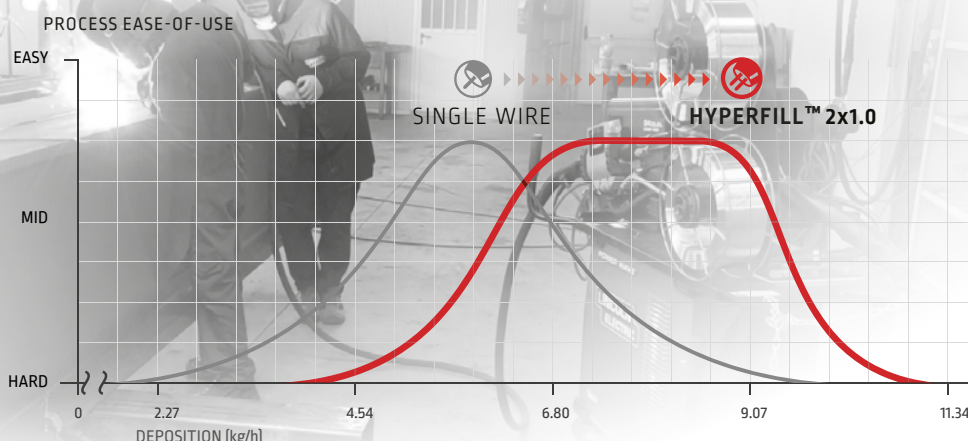
LOWER VOLTAGE ENABLES THE USE OF HIGHER DEPOSITION RATES AND CAN REDUCE UNDERCUT



EXCELLENT
WELD
PROFILE AND
PENETRATION

HIGHER DEPOSITION RATE

PROCESS COMPARISON – DEPOSITION RANGE IN SEMI-AUTOMATIC WELDING



WITH
EASIER PUDDLE
CONTROL UP TO
9 kg/h

POWER WAVE® S500

INDUSTRY LEADING PERFORMANCE AND RELIABILITY



POWER WAVE® SOFTWARE SOLUTIONS

– Access to monitoring the welding processes. Anytime. Anywhere.

Sequencer



Power Wave®
Manager



CheckPoint™



WeldScore™



www.PowerWaveSoftware.com



EASY IMPLEMENTATION

SINGLE POWER + SINGLE FEEDER + SINGLE GUN LINER + SINGLE CONTACT TIP + SINGLE ELECTRICAL ARC

= LOW SYSTEM COMPLEXITY + EASY IMPLEMENTATION + LOW INVESTMENT



THE SOLUTION COMPONENTS



Power Source

Power Wave® S500
with Reel stand
conversion kit
+ Cool Arc® 50



Wire Feeder

Power Feed® 84
HyperFill™ Drive Rolls
(0.35-0.45)
HyperFill™ Inlet Bushing



Dual Wire Reels Stand /
Cart Mounting Kit / Accessories



Consumables for mild steel*

Supramig® HD / HF
AWS 5.18: ER70S-6
ISO 14341-A: G 46 4 M 3Si1
/ G 42 3 C 3Si1

Supramig Ultra® HD / HF
AWS 5.18: ER70S-6
ISO 14341-A: 14341-A G46 3
C 4Si1 / G50 5 M 4Si1

Gun / Torch

Magnum®PRO 500W
Water Cooled Gun
Patented HyperFill™ Tip



* Contact our local representative for Oerlikon wires.

HYPERFILL™ CAN INCREASE YOUR PRODUCTIVITY BECAUSE:

HyperFill™ will provide all users with the opportunity to achieve higher deposition rates, faster travel speeds, and make bigger welds with greater ease.



HyperFill™
takes your high
deposition welding
to the next level

LET US PROVE IT.

**BOOK AN
APPOINTMENT
NOW!**

BEING PRESENT LOCALLY MAKES US MORE AWARE GLOBALLY

120+
YEARS OF EXPERIENCE

325+
GLOBAL R&D TEAM



TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending

on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

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

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