INCREASE YOUR DEPOSITION RATE BY UP TO 50%
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.

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.

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.

USER ADVANTAGES

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

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

DIRECTION OF TRAVEL

Wire B
 wire A
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

<table>
<thead>
<tr>
<th>HyperFill™ 2x1.0 mm</th>
<th>9.07 kg/h</th>
<th>+54%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HyperFill™ 2x1.0 mm</td>
<td>8.16 kg/h</td>
<td>+38%</td>
</tr>
<tr>
<td>HyperFill™ 2x1.0 mm</td>
<td>7.26 kg/h</td>
<td>+23%</td>
</tr>
<tr>
<td>Single Wire</td>
<td>5.9 kg/h</td>
<td></td>
</tr>
</tbody>
</table>

**UP TO +54% WELD LENGTH**

**USER ADVANTAGES**

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

**HYPERFILL™ AGAINST THE GRAVITY**

PRODUCE LARGER BEADS AT HIGHER SPEED, KEEPING SYMMETRIC 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, 2.7kJ/mm

MORE THAN 7 mm 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**

<table>
<thead>
<tr>
<th>DEPOSITION (kg/h)</th>
<th>EASY</th>
<th>MID</th>
<th>HARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2704</td>
<td>.546</td>
<td>.809</td>
<td>.07</td>
</tr>
<tr>
<td>11.341</td>
<td>3.61</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PROCESS EASE-OF-USE**

- SINGLE WIRE DEPOSITION (kg/h)
  - HYPERFILL ™ 2x1.0

**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

- **Gun / Torch**
  - Magnum® PRO 500W
  - Water Cooled Gun
  - Patented HyperFill™ Tip

- **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

* Contact our local representative for Oerlikon wires.

**REDUCED FUME GENERATION**

- 1.0 mm HyperFill  8.2 kg/h
- 1.2 mm Supramig® HD Pulse  6.4 kg/h
- 1.2 mm Supramig® HD Pulse  8.2 kg/h
- 1.3 mm Supramig® HD Pulse  8.2 kg/h
- 1.3 mm Supramig® HD CV  8.2 kg/h
- 1.6mm MC-706 8.2 kg/h

**EASY IMPLEMENTATION**

- SINGLE POWER + SINGLE FEEDER + SINGLE GUN LINER + SINGLE CONTACT TIP + SINGLE ELECTRICAL ARC
- LOW SYSTEM COMPLEXITY + EASY IMPLEMENTATION + LOW INVESTMENT

**WITH EASIER PUDDLE CONTROL UP TO 9 kg/h**

- EASIER PUDDLE CONTROL UP TO 9 kg/h

- TOTAL FUME GENERATION (gr / min)
  - 0.0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8
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.

- Higher deposition rate
- Faster travel speed
- Low investment
- Easy implementation
- Capable of excellent weld quality
- Bigger welds

HyperFill™ takes your high deposition welding to the next level.

Let us prove it.

Book an appointment now!
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. Further, 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 customer’s particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change — This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.eu for any updated information.