Designed to revolutionize heavy fabrication productivity, the patented HyperFill twin wire MIG solution allows for increased deposition rates without compromising puddle stability or weld quality. Utilizing a single power source, a single wire feeder, and a single tip, this innovative twin wire design delivers a wide, smooth arc cone that allows for deposition rates above 18lbs/hr | 8.2 kg/hr. (24 lbs/hr | 10.9 kg/hr robotic) without added system or operator complexity.

**PROCESS COMPARISON - 5/16 IN | 8 MM FILLET AT 18 LBS | 8.2 KG / HR**

**Single Wire**  
E70C-6M .052 IN (1.32 MM)

Generates a deep, narrow arc cone  
Arc stability deteriorates at higher wire feed speeds making process more difficult to use

Narrow arc cone, narrow penetration profile. Increased risk of weld defects at higher deposition rates.

**HYPERFILL**  
SuperArc® .040 IN (1.0 MM)

Generates a wide, evenly-distributed arc cone  
Smooth, stable puddle is more favorable and makes process easy to use at higher deposition rates

Wide arc cone leads to favorable, robust penetration profile and helps to improve weld quality at high deposition rates.

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**SOLUTION COMPONENTS**

- **Power Source**
  - Power Wave® S500
  - Power Wave® R450 / S700 (Robotic)
  - HyperFill® Waveform
  - Cool Arc® 55 or 55S

- **Gun / Torch**
  - Magnum® PRO 500A Water Cooled Gun
  - Magnum® PRO 500A Water Cooled (Robotic)
  - HyperFill® Tip (contact tip, diffuser)

- **Wire Feeder**
  - Power Feed® 84
  - AutoDrive® 4R 220 (Robotic)
  - HyperFill® Drive Rolls (0.035 - 0.045)
  - HyperFill® Inlet Bushing

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**PROCESS COMPARISON - DEPOSITION RANGE**

**PRODUCTIVITY INCREASE  ** SINGLE WIRE VS. HYPERFILL

<table>
<thead>
<tr>
<th>Distance Traveled (ft/0.3 m)</th>
<th>Power Wave® S700</th>
<th>Power Wave® R450 / S500</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 FT 1.0 M</td>
<td>24 LBS</td>
<td>10.89 KG / HR</td>
</tr>
<tr>
<td>1.31 FT 0.4 M</td>
<td>20 LBS</td>
<td>9.07 KG / HR</td>
</tr>
<tr>
<td>2.62 FT 0.8 M</td>
<td>16 LBS</td>
<td>7.26 KG / HR</td>
</tr>
<tr>
<td>3.94 FT 1.2 M</td>
<td>13 LBS</td>
<td>5.95 KG / HR</td>
</tr>
<tr>
<td>5.25 FT 1.6 M</td>
<td>11 LBS</td>
<td>5.04 KG / HR</td>
</tr>
<tr>
<td>6.56 FT 2.0 M</td>
<td>9 LBS</td>
<td>4.09 KG / HR</td>
</tr>
</tbody>
</table>

**FUME GENERATION CHART**

- 0.035 HyperFill 18 lb/hr (0.9mm - 8.2 kg/hr)
- 0.045 L-59® Pulse 14 lb/hr (1.2mm - 6.4 kg/hr)
- 0.045 L-59® Pulse 18 lb/hr (1.2mm - 8.2 kg/hr)
- 0.052 L-59® Pulse 18 lb/hr (1.3mm - 8.2 kg/hr)
- 0.052 L-59® CV 18 lb/hr (1.3mm - 8.2 kg/hr)
- 1/16 MC-706 (1.6mm - 8.2 kg/hr)

**INCREASED DEPOSITION RATES**

On average, usable deposition rates increase up to 50% while maintaining process ease-of-use.

**DEPOSITION LBS | KG / HR**

- 5 lbs | 2.27 kg
- 10 lbs | 4.54 kg
- 15 lbs | 6.80 kg
- 20 lbs | 9.07 kg
- 25 lbs | 11.34 kg
- 30 lbs | 13.61 kg

**PROCESS EASE-OF-USE**

- EASY
- MID
- HARD

**Test Results Disclaimer**

Test results for mechanical properties, deposit, fume generation, or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards. Actual results will vary depending on many factors, including, but not limited to: the base material or substrate being welded, the welding procedure and welding process, and the unique conditions present in the workplace or welding environment. Users and employers have the sole responsibility and control over workplace conditions. Always read and follow applicable OSHA regulations as well as all information on product labeling and safety data sheets when using Lincoln Electric products. Safety data sheets for Lincoln Electric products can be found at http://www.lincolnelectric.com/en-us/support/CDS/Pages/osd-search.aspx. Users and employers should have an industrial hygienist check worker exposure levels to be certain that they are within applicable OSHA PEL and ACGIH TLV limits for the particular application or weldment.

**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. 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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