Sparcon low cement gun mixes provide all of the benefits of low cement technology in products that are engineered specifically for dry gunning. These products are designed for dry gunning ONLY. Because these products use low cement binder technology, they should not be gunned like conventional, high cement refractory products.

Sparcon low cement gun mixes are very user friendly and require equipment and procedures common to the refractory gunite industry. The following equipment, pressure and feed wheel speed recommendations should be followed.

**Equipment**

**Guns**
- Double chamber guns such as the Allentown N-1, N-2, or N-3
- Rotary guns such as the Reed Sova or Blastcrete model 020

**Feed Bowl or Rotor (for rotary guns)**
- Reed Sova: use half height bowl with 18 to 21 holes
- Blastcrete model 020: use half height rotor

*Note: DO NOT use full height bowls or rotors with rotary guns*

**Air Compressor:** 450 cfm minimum with 2” diameter bull hose to supply gun. *(Operating pressure: 120 psi)*

**Water Booster Pump:** Any pump capable of developing 150 – 200 psi pressure *(ex. – Teel model 2PC32)*

**Nozzles and Gunite Hose**
- Double bubble, Hamme, Spirolet, or metal pipe (1.25 – 1.50” diameter 2.5 – 3.5’ long)
- Use a 10” – 15” long hose extension between water ring and rubber nozzles. No extensions necessary when using 2.5’ – 3.5’ long metal pipe. Use 1.25” diameter or 1.5” diameter gunite hose (1.5” dia. preferred)

**Water rings:** 16 hole type or “fan” type with 0.004 to 0.015 “ gap

**Water Valve:** 3/8” needle valve *Note: Do not use gate valves*

**Pressures**

<table>
<thead>
<tr>
<th>Gun</th>
<th>Line *</th>
<th>Feed pressure</th>
<th>Tachometer</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allentown N-1</td>
<td>45 - 50 psi</td>
<td>18 - 23 psi</td>
<td>25 - 35 rpm</td>
<td>150 - 200 psi</td>
</tr>
<tr>
<td>Allentown N-2</td>
<td>42 - 47 psi</td>
<td>15 - 20 psi</td>
<td>25 - 35 rpm</td>
<td>150 - 200 psi</td>
</tr>
<tr>
<td>Allentown N-3</td>
<td>40 - 45 psi</td>
<td>10 - 15 psi</td>
<td>25 - 35 rpm</td>
<td>150 - 200 psi</td>
</tr>
<tr>
<td>Reed Sova</td>
<td>32 - 37 psi</td>
<td>25 - 32 psi</td>
<td>- - -</td>
<td>150 - 200 psi</td>
</tr>
<tr>
<td>Blastcrete model 020</td>
<td>45 - 53 psi</td>
<td>- - -</td>
<td>slow - medium</td>
<td>150 - 200 psi</td>
</tr>
</tbody>
</table>

* - line pressure listed for 100-150’ of gunite hose. Add 5 – 20 psi for each additional 100’ of hose

**Pre-dampening:** 1/3 to 2/3 quarts per 50 lbs of gun mix - mix in paddle type mixer for 4 minutes

Pre-dampening is recommended with all guns as it will help material drop from top of gun to feed mechanism more easily.

**Comments:** To obtain best application and strengths, Sparcon products should not be gunned too wet. When these guidelines are followed, TYPICAL rebound losses should range from 10% to 20% for sidewalls and from 25% to 35% for thick linings overhead. Material and ambient temperatures should be 60°F to 80°F during installation.

For further information, call Spar Research and Development at (336) 882-7294.