INSERTEC manufactures the Rotary and Tilting Furnaces model **FARB**, with an oxy-fuel combustion system, and with state of the art technology for the competitive Aluminium Recycling Industry.

Their main features are:
- Increase in the productivity
- Lower operation costs
- Increase in metal yield
- Reduction of emissions
- Reduction of final disposal to land-fill or secondary recyclers.

This kind of furnace can increase productivity as a result of shorter melting cycles by increasing the melting rate on the furnace.

Compared with usual fixed axis rotary furnaces, also reduce the amount of salts and fluxes required for the process, and therefore the amount of final disposal salt cake.

Has a better thermal efficiency, using oxygen instead of air, and so reducing amount of emissions and content in NOx.

Improve the chemical analysis because shorter cycle times.

The **FARB Rotary Furnace** counts with a very advanced design for recycling all kind of aluminium and other non-ferrous dross and scraps, with a minimum consumption of salts.

Today, it is considered as the most advanced and competitive type of furnace, due to their short cycle times, small amount of salts required and high yield in metal recovery.

In general the **FARB** is supplied with an oxy-fuel combustion system, and uses a kind of process called "dry salts".

These two features, combined with the tilt type design of the furnace, allow the **FARB** melt more rapidly and efficiently, with tap-to-tap cycle times between 2 and 3 hours, with a thermal efficiency among 75-80%, and productivity time over 98%.

Another important issue to be considered is the support offered by INSERTEC regarding experience in processing different type and kinds of materials, experience gained along a good number of important projects all around the world.
The FARB Furnace is a universal solution for processing all kind of materials, such as:
- Dirty scraps, with dust, paint, plastics
- Foundry returns
- Automotive parts with ferrous inserts
- Aluminium cans, UBC
- Chips, turnings
- White and black drosses

Some features of its design are:
- Tap-to-tap cycle times, from 2.5 to 3 hrs
- Ratio of salts required, 0.4 to 0.5 of NMP
- Energy consumption, 400 kWh/MT
- Rotary speed, up to 8-12 rpm
- Robust steel structure, with a proven drum
- Long life refractory lining
- Oversized driving system and bearings
- Hydraulically Rotation and Tilting systems
- Supervision and control from PLC

### Technical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>FARB-12</th>
<th>FARB-16</th>
<th>FARB-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (MT)</td>
<td>12 Mton</td>
<td>16 Mton</td>
<td>24 Mton</td>
</tr>
<tr>
<td></td>
<td>8 m3</td>
<td>10 m3</td>
<td>15 m3</td>
</tr>
<tr>
<td>Input (Mton)</td>
<td>10.5 / 11.5</td>
<td>13.5 / 15.0</td>
<td>20.0 / 22.5</td>
</tr>
<tr>
<td>Dross / Scraps</td>
<td>1.50 / 0.5</td>
<td>2.5 / 1.0</td>
<td>4.0 / 1.5</td>
</tr>
<tr>
<td>- Salt required</td>
<td>7 / 10.5</td>
<td>9.5 / 14.0</td>
<td>14.0 / 20</td>
</tr>
<tr>
<td>Output (Mton):</td>
<td>5.0 / 1.5</td>
<td>6.5 / 2.0</td>
<td>10.0 / 4.0</td>
</tr>
<tr>
<td>- Molten Metal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Salt cake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Production</td>
<td>45 Mton</td>
<td>70 Mton</td>
<td>85 Mton</td>
</tr>
<tr>
<td>- Dross</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Scrap</td>
<td>70 Mton</td>
<td>100 Mton</td>
<td>130 Mton</td>
</tr>
</tbody>
</table>

Figures for melting processes of 65% Al Drosses and 90% Al Scraps respectively