

# Rotary FARB Aluminium Recycling

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Rotary FARB - En

**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  $\text{NO}_x$

Improve the chemical analysis because shorter cycle times.



Tilting Rotary Furnace FARB-16

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.



FARB with door, rake and saltcake train

Ingeniería y Servicios Técnicos, S.A.

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# FARB Furnace Aluminium Recycling

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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



**FARB with door opened, drain off molten metal with dross rake and saltcake into bins of Salt car**

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

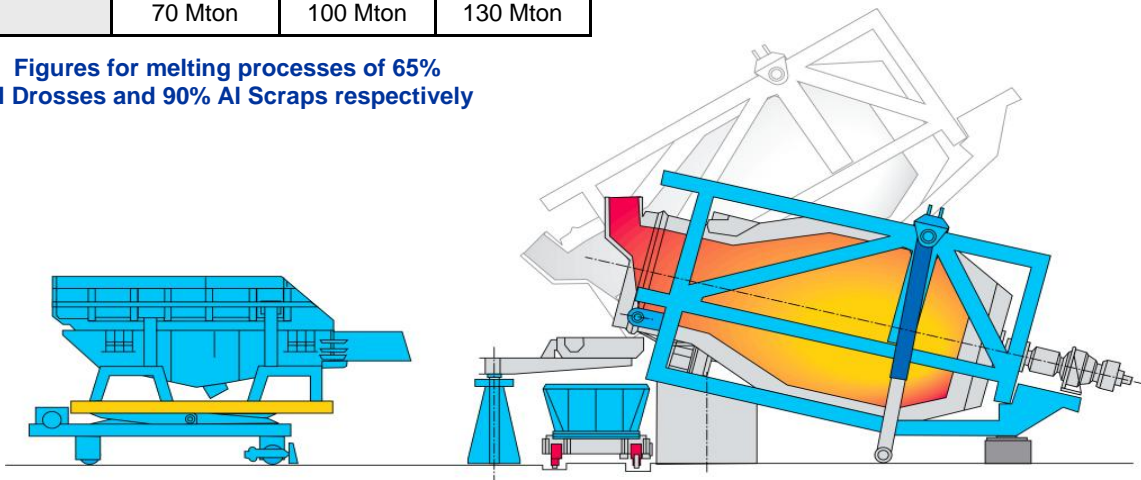


**View of one FARB-24 and its charge feeder**

## Technical Specifications Rotary Furnaces Tilting type FARB

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

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



**Ingeniería y Servicios Técnicos S.A.**

Avda. Cervantes, 6 – 48970 Basauri, Vizcaya, Spain  
Tel.: +34-944 409 420 / Fax: +34-944 496 62 / e-mail: [insertec@insertec.biz](mailto:insertec@insertec.biz)