



ROTARY FURNACE

1 Barrel Hotface

Selection of hotface material relies on process conditions and mainly on the level of salt addition. With low salt addition, focus will be on resistance to aluminium corrosion, while with higher salt addition the focus will be on resistance to these salts.

- ALKON® CAST LB 85 ALKON® SOL CAST HT: solution for process with low salts
- AC 85 P: P-bond brick solution in high temperature environments
- CALDE® CAST ML 55 S5 or CALDE® CAST LA 50 SZ: monolithic solutions for processes with high salt levels
- CALDE® BRICK F 45: cost effective brick solution
- HAZAL T2 AR

Dross recovery units: best solution to custom design based on temperature peaks in the process.

Cast in-situ solution with metallic anchor possible, or a combination with bricks.

Precast solutions allow quick furnace relining and best abrasion resistant performance.

2 Spout Ring

- ALKON® CAST LB 85 ALKON® SOL CAST HT: solution for processes with low salts
- CALDE® CAST GIBRAM: solution for processes with high salt levels. Reinforce with steel fibres
- CALDE® WIRE MIX precast shapes for extra resistance to mechanical impact and thermal shock. Ideal solution when the refractory ring is not protected by steel plates
- HAZAL T2 AR

3 Hearth/Bath Backlayer

- ALKON® CAST F 35 C/G: reference solution with installation versatility, on top of a thin fibre layer
- ALKON® CAST MW 14 C/G: for extra insulation
- HAZAL T2 AR

A compromise is to be found between low shell temperature (thermal efficiency), alloy and salt freeze point position (safety and lifetime), and furnace capacity (total thickness).

4 Burner Quarl

- CALDE® CAST PLAST P 85: P-bond plastic material reference
- CALDE® CAST LX 58: casting solution
- HAZAL T2 AR

To check if the quarl is subject to aluminium projections and flame rebounds.

5 Door & Exhaust

- CALDE® CAST M 28 D HR: reference solution
- CALDE® CAST ML 55 S5: alkali resistant solution
- HAZAL T2 AR

Extra insulation can be brought via insulating fiber choice.

6 Receiver

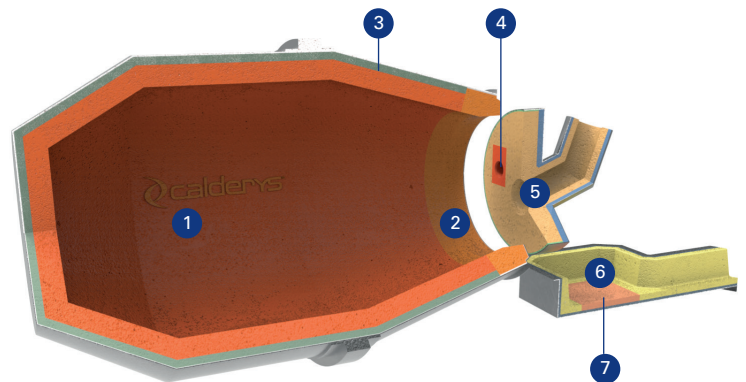
- ALKON® CAST LV 75 fused silica solution: for high volume stability and thermal cycling resistance
- ALKON® CAST MF 40 CFM: semi-insulating but dense cost effective solution
- HAZAL T2 AR

Extra insulation can be brought via insulating fiber choice.

7 Impact pad

- CALDE® CAST LS 85: for maximum thermal shock resistance
- ALKON® CAST BL 80 B3: for maximum abrasion resistance
- HAZAL T2 AR

Solution should be delivered in a precast shape with high firing temperature for maximum performance.



Cold Repairs

- ALKON® SOL CAST B 85: fast repair reference solution in sill, ramps and hearth

Specific patch or plastic solutions for small/finer repairs are also available.

Hot Repairs

- ALKON® GUN C 75 and ALKON® GUN F 50: emergency hot repair solutions



REFRACTORY SPECIFICATIONS

Selection of products shall be done in accordance with furnace process conditions. Calderys invites you to fill in a dedicated questionnaire to confirm product selection regarding temperature level, cycling, alloys, salt/flux usage, and charging/skimming practices.

Selection of product/design shall be done in accordance with shut-down duration requirements; solutions can differ based on the importance of speed. Tailor-made solutions such as pumping/gunning, easy dry-out materials, up to full precast can be supplied to lower cost of ownership when production loss per day is of high value.

The performance of the final solution is sensitive to the installation quality, from the equipment performance to the manpower skills/respect of refractory placement procedures. Calderys invites customers to engage its supervision of the installation work, up to full turnkey solutions to control the overall quality of the project: shutdown schedule, installation, dry-out and furnace commissioning.

Please ensure any product selection and/or design is validated by your Calderys sales representative.

Product name	Main component	Binding System	Max. Recomm. temp.(°C)	Density (g/cm ³)	Ease of Dry Out	Chemical analysis (avg %)			
						Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	SiC
AC 85 P	Bauxite	P-bond	1600	2.82	++	82	14	1.6	-
ALKON® CAST BL 80 B3	Bauxite	Hydraulic	1400	3.02	(-)	83.0	7.7	0.8	-
ALKON® CAST F 35 C/G	Chamotte	Hydraulic	1280	1.90		36.0	49.0	3.0	-
ALKON® CAST LB 85 ALKON® SOL CAST HT	Bauxite	Hydraulic	1300	2.90		84.0	8.0	0.7	-
ALKON® CAST LV 75	Fused Silica	Hydraulic	1000	2.14		21.0	73.5	0.1	-
ALKON® CAST MF 40 CFM	Cordierite	Hydraulic	1200	2.00		36.0	49.0	1.5	-
ALKON® CAST MW 14 C/G	Lightweight chamotte	Hydraulic	1200	1.38		40.0	37.0	3.0	-
ALKON® GUN C 75	Corundum	Hydraulic	1420	2.60	++	78.5	1.8	0.2	-
ALKON® GUN F 50	Chamotte	Hydraulic	1400	2.10		50.0	34.0	1.0	-
ALKON® SOL CAST B 85	Bauxite	Mineral reaction	1200	2.95		85.0	8.4	0.5	2.8
CALDE® BRICK 45	Chamotte	Fired Brick	1400	2.25		44.5	50.5	1.3	-
CALDE® CAST GIBRAM	Bauxite	Hydraulic	1600	2.92	+	85.0	10.0	1.0	-
CALDE® CAST LA 50 SZ	Andalusite	Hydraulic	1650	2.70		50.0	27.5	-	9.7
CALDE® CAST LS 85	Silicon Carbide	Hydraulic	1500	2.50		9.5	4.0	0.2	84.0
CALDE® CAST LX 58	Andalusite	Hydraulic	1650	2.45		57.0	38.0	1.1	-
CALDE® CAST M 28 D HR	Chamotte	Hydraulic	1550	2.25		45.5	47.8	1.3	-
CALDE® CAST ML 55 S5	High alumina raw materials	Hydraulic	1550	2.48		55.0	35.0	0.9	5.0
CALDE® PLAST P 85	Bauxite	Chemical	1650	2.75	++	84.0	8.0	0.9	-
CALDE® WIRE MIX	Diverse slurries	Hydraulic	1200	~3	++	Bauxite, mullite, SiC, high alumina slurries			

DISCLAIMER: CALDERYS does not warrant the accuracy, fitness for purpose or update of any information disclosed herein. The recipient shall refer to the present content as indicative only. For any instructions or advice, please address formal request to CALDERYS. This document and the information contained herein are the exclusive property of CALDERYS. Reproduction, alteration, copy, release, publication or distribution, in whole or in part, is not allowed. References, trademarks and specifications of the products may vary according to the geographical area to be supplied. For any inquiries regarding supply of products, please liaise with CALDERYS nearest sales contact. Errors and omissions excepted.