



# REVERBERATORY MELTING FURNACE

## 1 Hearth, sill & ramps

- ALKON® CAST HYMOR 80 AL: reference solution in alloy remelting environment
- AC 85 AP HAZAL B 85 P3/P4 (AL) or AC 80 P: P-bond brick solutions for harsh environment with superheating
- ALKON® CAST LB 85: solution in medium temperature melters
- ALKON® CAST BL 80 B3: for maximum abrasion resistance
- ALKON® SOL CAST B 85: for quick dry solution

Balance between abrasion resistance, corrosion resistance to be found. Can be supplied in large precast shapes and installed with rammed expansion joints.

## 2 Bath walls, Belly band and spouts hotface

- ALKON® CAST HYMOR 80 AL: reference solution with high resistance to strong alloys & flux
- ALKON® CAST LB 85: cost-effective solution in medium temperature melters

Can be supplied & installed in large precast shapes

- AC 85 AP HAZAL B 85 P3/P4 (AL) or AC 80 P: P-bond brick solutions for harsh environment with superheating
- ALKON® CHEM PB 85: quick installed and dry solution, excellent against corrosive alloys

## 3 Hearth/Bath backlayer

- ALKON® CAST F 35 C/G: reference solution with installation versatility, on top of fibre board
- ALKON® CAST MW 14 C/G: for extra insulation
- ALKON® CAST MF 44: for less insulation and better freeze point positioning

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

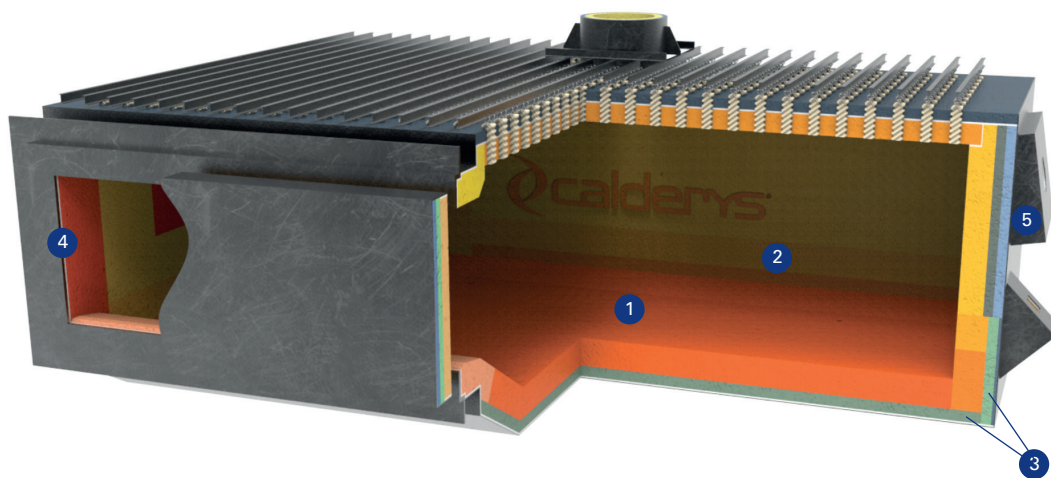
## 4 Lintel and door jambs

- CALDEv CAST LX 58: reference solution with high thermal shock resistance
- CALDE® WIRE MIX: in precast shapes for great durability against mechanical abuse and thermal shocks, replacing metal protective plates

## 5 Burner quarl

- CALDE® PLAST P 85 or ALKON® GUN P: P-bond plastic material reference
- ALKON® GUN C 75: versatile solution
- ALKON® CAST HYMOR 80 AL: casting solution

To check how much the quarl is subject to aluminium projections and flame rebounds



**6 Upper walls hotface**

- ALKON® CAST MM 60, ALKON® GUN P or ALKON® GUN C 75: solutions in walls subject to aluminium splashes and corundum growth like burner walls
- CALDE® CAST M 28 D HR and CALDE® CAST 1560: reference solutions in walls less exposed
- CALDE® CAST ML 55 S5/ GUN MM 55 S5: alkali resistant solution

**7 Upper wall backlayer & anchoring**

- CALDE® CAST XL 116 C/G or CALDE® GUN XL 126 on top of insulating board: reference solution.

Versatile and extra insulating; metallic or ceramic anchors.

**8 Roof**

- CALDE® CAST 1560: reference solution
- CALDE® CAST LX 58: for extra thermal cycling
- CALDE® CAST ML 55 S5: alkali resistant solution
- ALKON® CAST MM 60: solution in high-temperature and metal projection case

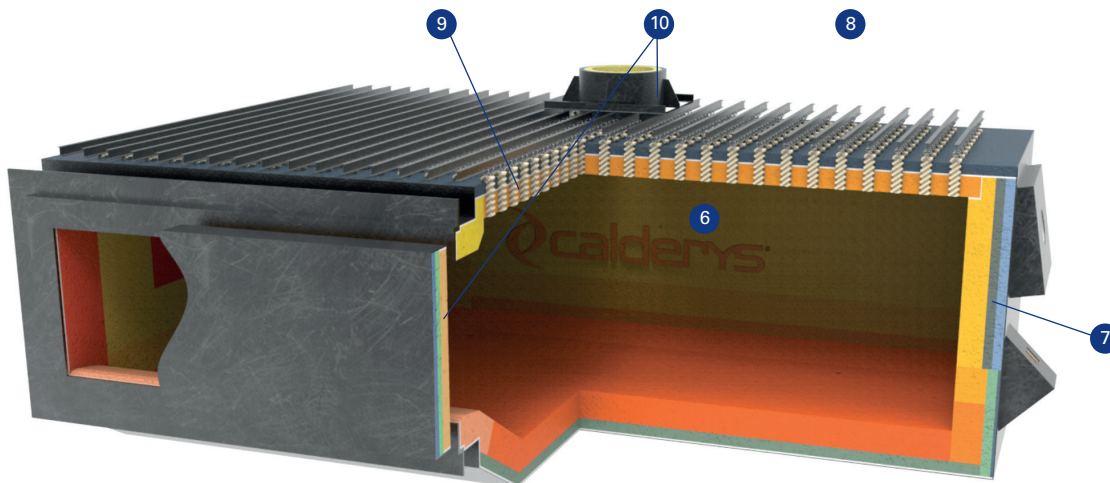
**9 Roof backlayer & anchoring**

- CALDE® CAST MW 130 M: gas barrier intermediate layer
  - CALDE® CAST XL 140 or 116 C/G: insulating layer references
- Metallic, ceramic and cast steel anchors can be used. Preferably combination designs adapted to furnace mobility, roof shape, hanging supports and roof accessibility.

**10 Door & Exhaust**

- CALDE® CAST M 28 D HR: reference solution
- CALDE® CAST MW 130 M: for lighter solution

Extra insulation can be brought via insulating fibre choice.



**Cold Repairs**

- ALKON® SOL CAST B 85: fast repair reference solution in sill, ramps and hearth
  - ALKON® CHEM PB 85: fast repair reference in belly-band for extra resistance to corrosion
  - ALKON® GUN P and ALKON® GUN C 75: fast repair solutions in all walls and roofs
- Specific patch or plastic solutions for small/finer repairs are also available.

**Hot Repairs**

- ALKON® GUN C 75: emergency hot repair solution in bath and upper areas



# 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 <sup>3</sup> )	Ease of Dry Out	Chemical analysis (avg %)			
						Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	SiC
ALKON® CAST HYMOR 80 AL	Corundum	Hydraulic	1420	3.13		84.0	3.1	0.1	
ALKON® CAST LB 85	Bauxite	Hydraulic	1300	2.90		84.0	8.0	0.7	
ALKON® CAST BL 80 B3	Bauxite	Hydraulic	1400	3.08	(-)	83.0	7.7	0.8	
ALKON® SOL CAST B 85	Bauxite	Mineral Reaction	1200	2.95	(++)	85.0	8.4	0.5	2.8
ALKON® CHEM PB 85	Bauxite	Chemical Inorganic	1400	2.93	(+)	85.0	2.4	0.8	
ALKON® CAST F 35 C/G	Chamotte	Hydraulic	1280	2.00		36.0	49.0	3.0	
ALKON® CAST MW 14 C/G	Lightweight chamotte	Hydraulic	1200	1.53		40.0	37.0	3.0	
ALKON® CAST MF 44	Chamotte	Hydraulic	1200	2.16		43.0	49.0	1.2	
CALDE® CAST LX 58	Andalusite	Hydraulic	1650	2.50		57.0	38.0	1.1	
CALDE® PLAST P 85	Bauxite	Chemical Inorganic	1650	2.80		84.0	8.0	0.9	
ALKON® GUN P	Bauxite	Chemical Inorganic	1600	2.63	(+)	83.0	8.2	0.9	
ALKON® GUN C 75	Corundum	Hydraulic	1420	2.73	(++)	78.5	1.8	0.2	
ALKON® CAST MM 60	High alumina raw materials	Hydraulic	1450	2.50		61.0	26.0	0.9	
CALDE® CAST M 28 D HR	Chamotte	Hydraulic	1550	2.25		45.5	47.8	1.3	
CALDE® CAST 1560	Andalusite	Hydraulic	1650	2.45		59.0	36.0	1.1	
CALDE® GUN MM 55 S5	High alumina raw materials	Hydraulic	1500	2.42		58.0	30.0	0.9	4.0
CALDE® CAST ML 55 S5	High alumina raw materials	Hydraulic	1550	2.48		55.0	35.0	0.9	5.0
CALDE® CAST XL 116 C/G	Lightweight chamotte, Vermiculite	Hydraulic	1160	0.84		28.5	30.0	10.3	
CALDE® GUN XL 126	Lightweight aggregates	Hydraulic	1260	0.95		31.0	38.0	9.3	
CALDE® CAST MW 130 M	Lightweight chamotte	Hydraulic	1300	1.55		37.5	42.5	6.0	
CALDE® CAST XL 140	Lightweight aggregates	Hydraulic	1400	0.72		49.0	35.0	0.9	
AC 80 P	Bauxite	Chemical Inorganic	1550	2.8		78.0		1.6	
AC 85 AP HAZAL B 85 P3/ P4 (AL)	Bauxite	Chemical Inorganic	1500	2.9		85.2		1.4	

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