



CORELESS INDUCTION FURNACE

1 Hot Face

4 installation techniques possible depending on the need in speed and cost/performance ratio,

Wet-ramming installation: cost effective but difficult and long to install.

- ALKON® RAM PB 70: wet ramming reference solution
- ALKON® RAM PF 45: cost-effective solution

Dry-ramming installation: installation is key to performance.

- ALKON® DRY BC 90: dry ramming reference solution

Cast in-situ solution: high performance but very long dry-out.

- ALKON® CAST MM 60: reference solution

Large precast shape solution: maximum speed and high performance.

- ALKON® CAST LB 85 ALKON® SOL CAST HT: reference solution
- ALKON® CAST MT 90: high purity solution reinforced with steel fibres with ALKON® DRY SF 40 safety layer

2 Upper Furnace

Generally made with the same material as bath

- ALKON® RAM PB 70: wet ramming reference solution
- CALDE® PLAST P 85: plastic ramming solution
- ALKON® CAST LB 85 ALKON® SOL CAST HT: precast piece

3 Support Rings

- CALDE® CAST LX 58: long lasting castable standard solution
- CALDE® SOL CAST M 60 2CP: quick-dryout sol-bonded solution

4 Spout

- ALKON® CAST 204: castable solution
- CALDE® PLAST P 85: plastic ramming solution
- CALDE® SOL CAST M 60 2CP: quick-dryout sol-bonded solution
- CALDE® CAST LS 85: high performance solution

5 Lid

- ALKON® CAST F 35 C/G: cost effective solution
- ALKON® CAST MW 14 C/G: semi-insulating solution

6 Coil Grout and Insulation

- CALDE® STIX T 90 G1: reference solution for troweling application
- CALDE® FLOW UT 92: self-flowing solution
- MICA or COMBI FOIL: as slip plane



Cold Repairs

- ALKON® CHEM PB 85 and ALKON® CHEM STIX PB 85: 2 component cold setting fast repair reference solution for top capping and spout. Available in castable or patching
- ALKON® STIX C 75: repair of small areas by trowelling

Installation

- CALDERYS also offers various equipment such as vibrators or dust-free installation machines as well as special coatings of the CALDE® SHIELD range that protect your lining against Zinc vapor deposits



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. From wet ramming & cast in-situ, up to dry ramming and large 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/cm³)	Ease of Dry Out	Chemical analysis (avg %)			
						Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	SiC
ALKON® CAST 204	Bauxite	Hydraulic	1200	2.80	(-)	81	8.8	0.7	2.9
ALKON® CAST F 35 C/G	Chamotte	Hydraulic	1280	2.00		36	49.0	3.0	
ALKON® CAST LB 85 ALKON® SOL CAST HT	Bauxite	Hydraulic	1300	2.90		84	8.0	0.7	
ALKON® CAST MM 60	High alumina raw materials	Hydraulic	1450	2.50		61	26.0	0.9	
ALKON® CAST MT 90	Tabular alumina	Hydraulic	1550	3.03		90	0.2	0.1	
ALKON® CAST MW 14 C/G	Lightweight chamotte	Hydraulic	1200	1.53		40	37.0	3.0	
ALKON® CHEM PB 85	Bauxite	Chemical Inorganic	1400	2.93	(+)	85	2.4	0.8	
ALKON® CHEM STIX PB 85	Bauxite	Chemical Inorganic	1400	2.70		81	1.4	0.5	
ALKON® DRY BC 90	Corundum	Chemical Inorganic	1400	3.05	(++)	92.5	1.1	0.2	
ALKON® DRY SF 40	Chamotte	Ceramic	1600	2.46		40	52.5	1.4	
ALKON® RAM PB 70	Bauxite	Chemical Inorganic	1420	2.89		70	11.0	1.0	
ALKON® RAM PF 45	Chamotte	Chemical Inorganic	1420	2.52		43	35.0	0.8	
ALKON® STIX C 75	Corundum	Hydraulic	1420	2.41		76	1.5	0.1	
CALDE® CAST LS 85	Silicon carbide	Hydraulic	1500	2.55		9.5	4.0	0.2	84.0
CALDE® CAST LX 58	Andalusite	Hydraulic	1650	2.50		57	38.0	1.1	
CALDE® FLOW UT 92	Tabular alumina	Hydraulic	1750	2.90		91.5	7.4	0.1	
CALDE® PLAST P 85	Bauxite	Chemical Inorganic	1650	2.80	(+)	84	8.0	0.9	
CALDE® SOL CAST M 60	High alumina raw materials	Mineral Reaction	1650	2.45	(++)	60	37.0	0.8	
CALDE® STIX T 90 G1	Tabular alumina	Hydraulic	1750	2.83		91	3.0		

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