



# RUNNERS & TREATMENT BOX

## 1 Runner Between Furnace

- ALKON® CAST LM 68 and ALKON® CAST 204: reference solutions
- CALDE® CAST LS 60 and CALDE® CAST LS 85: for maximum thermal shock resistance in first sections
- 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

Precast solution available.

## 2 Runner Towards Casting Area

- ALKON® CAST LV 75: fused silica solution for high volume stability and thermal cycling resistance
- ALKON® CAST MF 40 CFM: semi-insulating and dense cost effective solution
- ALKON® CAST LW 10 C/G: insulating solution for minimum thermal loss
- CALDE® CAST XL 140: extra insulating solution

Precast solution available. Protective coating is recommended to maximize lifetime and ensure metal quality.

## 3 Treatment Box Hotface

- ALKON® FLOW LB 75: reference solution with self-flowing properties to cast in one time
- ALKON® CAST MT 90: high corrosion resistance solution
- ALKON® CAST LV 75: fused silica solution for high thermal shock/cycling resistance

In house service available to deliver you a treatment box ready to use.

## 4 Dam / Weir

- CALDE® CAST LS 85: reference solution
- ALKON® CAST LV 75: fused silica
- ALKON® CAST MT 90

## 5 Insulation

- Aluminium infiltration barriers
- Layers of insulating bricks and boards to minimize thermal loss and to prevent hydrogen pick-up. Shell temperature as low as 50°C can be reached

## 6 Runner and Treatment Box Lid

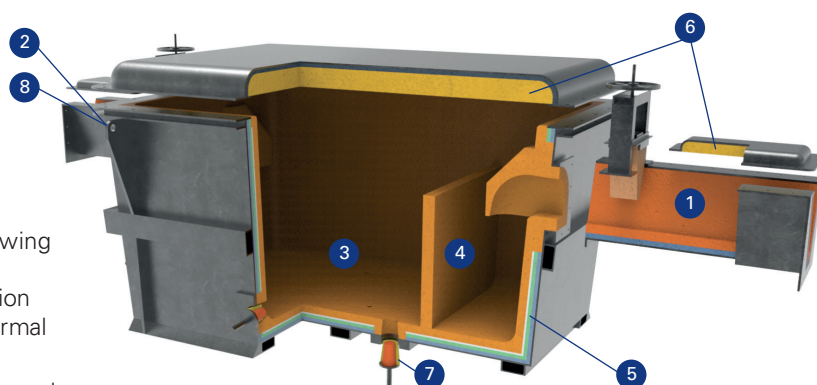
- ALKON® CAST MF 40 CFM: semi-insulating but dense solution if heated by electrical elements
- CALDE® CAST XL 116 C/G or ALKON® CAST LW 10 C/G: together with insulating fiber if not heated

## 7 Gas Purging

- Several solutions with porous or slotted plugs to select based on needed gas flow rate
- Changeable plug solutions

## 8 Coatings for Casting Runners

- CALDE® PATCH OZ 93 U: glass coating for easier aluminium skulls removal, to renew monthly
- ALKON® PATCH PT 85 U: solution for thin repairs or protective layer, and also to coat expansion joint ceramic fiber paper to avoid metal infiltration
- CALDE® PATCH BN: boron nitride solution (blue and white color) for high quality alloy, to renew frequently for casting runners



### In-house Relining Solution

- In house relining turnkey solutions available from treatment box pick-up, demolition of old lining, relining, dry-out and pre-heated delivery for quick reconnection in customer process. Work can include some mechanical, painting and sensor connection

### Cold Repairs

- ALKON® CHEM PB 85 and ALKON® CHEM STIX PB 85: casting/patching 2 component quick setting solution for quick and durable repairs showing mechanical strength and aluminium alloy high corrosion resistance
- ALKON® STIX C 75: versatile solution by hand patching
- ALKON® PATCH PT 85 U: solution for thin repairs



# REFRACTORY SPECIFICATIONS

Selection of products shall be done in accordance with process conditions.

For runners, Calderys invites you to fill in a dedicated questionnaire to confirm product selection regarding metal temperature loss, abrasion resistance and resistance to cleaning tools, size of the runner and request of volume stability.

For treatment box, Calderys invites you to fill in a dedicated questionnaire to confirm product selection and refractory design regarding OEM recommendations, metal temperature loss, abrasion resistance, resistance to chemical corrosion from alloys and treatment gas.

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 full precast or in-house relining 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 <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	SiC
<b>ALKON® CAST LM 68</b>	High alumina raw materials	Hydraulic	1400	2.60	1.68	68.0	25.0	0.6	
<b>ALKON® CAST 204</b>	Bauxite	Hydraulic	1200	2.80	2.60	81.0	8.8	0.7	2.9
<b>ALKON® CAST LV 75</b>	Fused silica	Hydraulic	1000	2.16	1.11	21.0	73.5	0.1	
<b>ALKON® CAST LW 10 C/G</b>	Lightweight chamotte	Hydraulic	1200	1.10	0.31	44.5	31.5	1.7	
<b>ALKON® CAST MF 40 CFM</b>	Cordierite	Hydraulic	1200	2.02	0.77	36.0	49.0	1.5	
<b>ALKON® CAST MT 90</b>	Tabular alumina	Hydraulic	1550	3.03	3.30	90.0	0.2	0.1	
<b>ALKON® CHEM PB 85</b>	Bauxite	Chemical Inorganic	1400	2.93	2.80	85.0	2.4	0.8	
<b>ALKON® CHEM STIX PB 85</b>	Bauxite	Chemical Inorganic	1400	2.70	1.90	81.0	1.4	0.5	
<b>ALKON® FLOW LB 85</b>	Bauxite	Hydraulic	1200	2.70	2.10	73.5	20.0	1.2	
<b>ALKON® PATCH OZ 93 U</b>	Zirconia oxid	Chemical Organic	1700						
<b>ALKON® PATCH PT 85 U</b>	Tabular alumina	Chemical	1200	2.50		85.0		0.1	
<b>ALKON® STIX C 75</b>	Corundum	Hydraulic	1420	2.41	1.20	76.0	1.5	0.1	
<b>CALDE® CAST LS 60</b>	Silicon Carbide	Hydraulic	1500	2.47	4.59	22.0	13.5	0.5	58.0
<b>CALDE® CAST LS 85</b>	Silicon Carbide	Hydraulic	1500	2.55	8.14	9.5	4.0	0.2	84.0
<b>CALDE® CAST XL 116 C/G</b>	Lightweight chamotte, Vermiculite	Hydraulic	1160	0.84	0.20	28.5	30.0	10.3	
<b>CALDE® CAST XL 140</b>	Lightweight aggregate	Hydraulic	1400	0.72	0.20	49.0	35.0	0.9	

**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.