

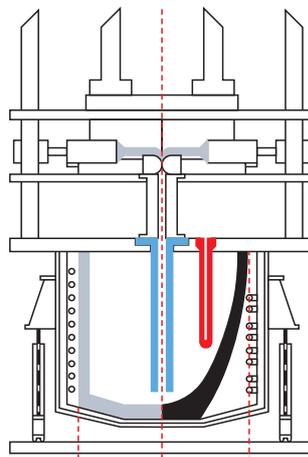


# EKatherm<sup>®</sup> LOW PRESSURE RISER TUBES

For aluminum casting  
applications



Steel flange system, full ceramic flange system



Monolithic Lining | Crucible |

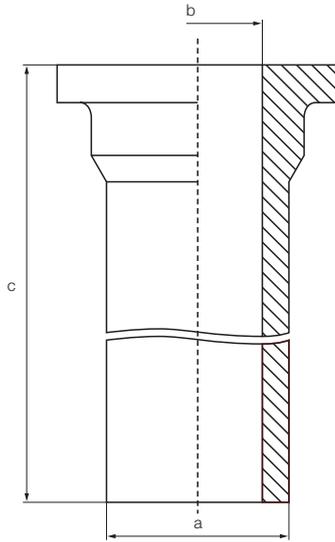
■ EKatherm<sup>®</sup> Low Pressure Riser tube  
■ Thermocouple Protection Tube

EKatherm<sup>®</sup> LPS in low pressure die casting  
equipment

The most advanced ceramic material  
used for the low pressure die casting of  
aluminum and its alloys.

## Advantages

- Zero open porosity to maintain the pressure differential
- Long life > 12 months
- Unaffected by corrosion
- No melt contamination
- Can be used in melts containing sodium and strontium
- Resists build up of dross
- High temperature resistance (1100 °C)
- High thermal shock resistance
- No preheating required
- Easy and reduced maintenance
- Cost effective



Supplied with metal or full ceramic flange

## Standard sizes and adaptor systems

Outside dia (mm) a	Inside dia (mm) b	Length (mm-up to) c
80	60	1200
90	70	1200
110	90	1200
125	105	1200
130	110	1200

Other sizes available on request

## Properties

Material Properties		
Density	g/cm <sup>3</sup> % TD	3,24 > 99
Porosity total	vol %	< 0,5
Porosity open	vol %	0
Young's modules	GPa	310
Flexural strength	MPa	700
Fracture toughness	MPa√m	7
Compressive strength	MPa	> 2500
Vickers-hardness	HV10	1450
Thermal conductivity	W/mK	22
Coefficient of thermal expansion	20 - 1000°C 10 <sup>-6</sup> K <sup>-1</sup>	3,0
Thermal stress parameters at 20°C $R_1 = \sigma_B \cdot (1 - \nu) / (\alpha \cdot E)$ $R_2 = R_1 \cdot \lambda$	[K] [W/mm]	605 13

We offer a choice of standard or customised full ceramic and steel flange systems to allow perfect adaption to the furnace.

PL/EKatherm®/e-08:2007

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001, DIN EN ISO 14001. EKatherm® is a registered trademark of ESK Ceramics GmbH Co. KG.

ESK Ceramics GmbH & Co. KG  
Max-Schaidhauf-Straße 25  
87437 Kempten, Germany  
www.esk.com, info@esk.com