ADVANCED STRUCTURE SILICON CARBIDE HEATING ELEMENTS
Kanthal is the heating technology brand within Sandvik; the world’s leading manufacturer of silicon carbide (SiC) heating elements. Our advanced structure silicon carbide heating element, Globar® AS, is a high performer in the Globar® elements range.

Globar® AS element material offers optimized particle size distribution, uniform pore distribution, and a consistency of structure unmatched by comparable products in the market today.

The material offers higher mechanical strength, greater consistency and repeatability of performance, and greater resistance to chemical attack, opening up new areas of application, and improving the performance in existing furnaces and equipment.

Globar® AS elements are designed to be interchangeable with the majority of standard products in the market, so upgrading performance of equipment is as easy as replacing the existing heating elements with Globar® AS. No changes to the equipment or power supply will be required.

**KEY APPLICATIONS**

**PRIMARY ALUMINUM INDUSTRY**
- Tilting holding furnaces

**FLAT GLASS INDUSTRY**
- Horizontal float elements

**CERAMICS AND ELECTRONICS INDUSTRY**
- Wide tunnel furnaces
- Ferrite production

**STEEL INDUSTRY**
- Continuous annealing lines
- Continuous galvanizing lines
LONG SPAN ELEMENTS
— Low thermal mass
— Quicker responding furnace
— Improved furnace efficiency

ONE-PIECE HOT ZONE
— Span wider furnaces
— Increased productivity
— Up to 3500 mm (137.8 in) one-piece hot zone
— Above 3500 mm (137.8 in) available on request

SIMPLE INSTALLATION
— No supports required
— Easy replacement

LIGHT WEIGHT PER KW
— Simplified furnace design

RESISTANT TO MECHANICAL SHOCK
— Advanced structure
— Tough and reliable performance

CYCLIC OPERATION
— Reduced downtime
— Reduced maintenance costs
— Increased productivity
— Improved OEE
Globar® AS is stronger than any competitive element on the market. This allows for longer, lighter and more efficient elements to be manufactured – extending the range of applications into which Globar® elements can be applied.

A key feature of Globar® AS is the consistency of the material properties. According to Weibull’s modulus (a measure of the repeatability of mechanical properties in brittle materials), Globar® AS elements have been measured as 14, while most silicon carbide heating elements typically are measured as <10.

**DESIGNED FOR CYCLIC USE**
Most silicon carbide elements are designed to deliver optimum performance when used continuously. Cyclic operation is known to reduce element life. Globar® AS is designed to minimize the effects from cyclic use.

When tested aggressively at 1425°C (2600°F), Globar® AS elements returned over 40% more cycles than the best performing competitor.

**DESIGNED TO RESIST CHEMICAL ATTACK**
Globar® AS is exceptionally resistant to aggressive furnace conditions. The pore structure of a Globar® AS element is more closed than the structure of many alternative products, limiting the penetration of surface contaminants and condensates into the material. This is especially important when the element is exposed to alkali glass deposits and drips. In applications with heavy glass deposits, the switch to Globar® AS elements has prolonged the life of the heating element by a factor of 10.

Glazed elements are available for additional protection.
IMPROVED STRENGTH

3pt bending strength comparison.

Strength 3pt, MPa

IMPROVED ELEMENT LIFE IN CYCLIC OPERATION

Cyclic test: Globar® AS vs. other manufacturers’ elements. 100 hour cycles at 1425°C (2600°F).
Globar® AS elements are available to order in both single rod and multi-leg forms, in a range of sizes that are interchangeable with all standard Kanthal elements, and products from other manufacturers.

**ORDERING**
The minimum information required when ordering Globar® AS elements is as follows:

**ROD TYPE ELEMENTS**
- Element type (Globar® AS)
- Diameter, mm
- Hot zone length, mm
- Overall length, mm
- Nominal resistance, Ω

**MULTI-LEG ELEMENTS**
- Element type [Globar® AS-B/U/CU/W/M]
- Diameter, mm
- Hot zone length, mm
- Cold end length, mm
- Leg center distance, mm
- Support slot position
- Nominal resistances, Ω

**TOTAL SERVICE**
Kanthal continues to provide total service – a complete service that makes your life easier. We not only supply a product, we offer our competence, advice and assistance and an after-sales service program second to none.