KANTHAL FOR A WARMER WORLD

Wherever electricity is converted into heat, we are likely to be there. We manufacture electric resistance heating material and heating elements that provide the heat in kitchen ranges, hair dryers, flat-irons, toasters, dish- and washing machines, in industry- and laboratory furnaces, copying machines, air- cleaning devices and everything else heated by electricity.

APPLICATIONS

Kanthal products are used to heat and control domestic appliances, laboratory- and industrial furnaces and different industrial processes.

The centre for product development and metallurgy is in Hallstahammar, Sweden, whilst sales and production finishing plants are located close to our customers around the world covered by some 20 subsidiaries and 30 representatives.

MANUFACTURING

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EUROPE

Belgium
Kanthal Representative Office, Sint-Pieters-\nTel +32 4 2704 287
Fax +33 2 2974 483

Denmark
Kanthal Norden AB
Tel +45 3676 6800
Fax +45 3676 0103

England
Kanthal Ltd
SUNBURY-ON-THAMES
Tel +44 1 784 224 800
Fax +44 1 784 224 820

Finland
Kanthal Norden AB
VANTAA
Tel +358 8962 1603
Fax +358 8962 1651

France
Kanthal France S.A.
COLOMBES-CEDEX
Tel +33 1 4786 5400
Fax +33 1 4786 5401

Germany
Kanthal GmbH
MÖRFELDEN-WALLDORF
Tel +49 61 05 4322
Fax +49 61 05 4322 10

Italy
Società Italiana Kanthal S.p.A
CINISELLO-BALSAMO
Tel +39 2 612 451
Fax +39 2 612 45350

Norway
Kanthal Norden AB
STRØMMEN
Tel +47 6484 3560
Fax +47 6484 3565

Poland
Sawickie Plikon S.P
WARSZAW
Tel +48 22 467 3830
Fax +48 22 467 3068

ASIA

Hong Kong
Kanthal Electroheat (HK) Ltd
Tel +852 2 735 7233
Fax +852 2 735 7238

India
Kanthal India Ltd
HOSUR
Tel +91 4344 570045
Fax +91 4344 572244

Japan
Kanthal K.K.
TOKYO
Tel +81 3 3445 1823
Fax +81 3 3445 5303

SINGAPORE
Kanthal Electroheat Pte Ltd
SINGAPORE
Tel +65 2 690 0300
Fax +65 2 690 0300

South Korea
Kanthal Sandvik Korea Ltd
SEOUL
Tel +82 2 761 0432
Fax +82 2 761 0435

AUSTRALIA

Australia
Kanthal Australia
DANDENONG
Tel +61 3 9328 7216
Fax +61 3 9328 7216

New Zealand
Sandvik Australasia Ltd
AUCKLAND
Tel +64 9 273 0888
Fax +64 9 273 8889

AFRICA

Kanthal Southern Africa
GAUTENG
Tel +27 11 914 3400
Fax +27 11 914 4633

Kanthal AB, Box 502, SE-734 27 Hallstahammar, Sweden
Tel +46 220 210 00, Fax +46 220 211 66
www.kanthal.com

A Sandvik Company
**HEATING ALLOYS**

KANTHAL® and NIROTHAL® resistance heating alloys for temperatures up to 1425°C 2590°F.

**Appliance Wire 0.12–2 mm 0.00468–0.078 in**  
Ribbon  
The heating source in most electric household appliances such as ovens, toasters, hair dryers, washing machines etc.

**Industrial Wire 1–12 mm 0.039–0.47 in**  
Strip  
Heating elements in industrial furnaces and processes.

**PRECISION WIRE**

Wire in dimension 0.015–0.12 mm 0.000585–0.00468 in is used in electronic components such as resistors and potentiometers, in computer disk drives, for low temperature heating, in guitar strings etc.  
A 0.015 mm wire is seen in the eye of a needle.

**THERMOSTATIC BIMETAL**  
Bimetal consists of two or more metallic strips with different thermal expansion bonded together. When heated up it bends in a pre-determined manner and can be used to monitor, measure or regulate heat in thermostats for room heaters or water mixing, to control toasters and indicators in automobiles etc.  
Kanthal offers a wide range of some 30 standard types of thermostatic bimetal with different specific deflection, manufactured in widths ranging between 1.0 and 170 mm 0.039–6.63 in and in thickness between 0.10 and 2.5 mm 0.0039–0.097 in.  
Bimetal is also manufactured as disc material to very close tolerances which give a snap action at a given temperature.

**SPECIAL ALLOYS**  
Copper-nickel, Nickel-iron, Spark plug electrode alloys, Thermocouple alloys.

**KANTHAL SUPER/SUPERTHAL®**  
High power and long life electric heating elements for use up to 1850°C 3360°F. Manufactured as ready-made elements, straight or bent in a broad range of standard dimensions. Superthal heating modules with Kanthal Super elements and ceramic fibre in the form of half-cylinders, cylinders, panels or completely tailor made for use up to 1600°C 2900°F.  
Used mainly in laboratory furnaces and production furnaces in the glass, electronics-, steel-, ceramics and heat treatment industry.

**HEATING ELEMENTS**  
Furnace systems and complete heating elements for semiconductor wafer processing. Furnace rebuilds, upgrades and new replacement furnace systems to provide larger wafer processing capabilities.

**METALLIC ELEMENTS**  
Ready-made furnace elements manufactured in Kanthal workshops from KANTHAL or NIROTHAL alloys for furnace temperatures between 50–1350°C 120–2460°F.

**FIBROTHAL®**  
A complete modular system comprising heating elements and insulation for furnaces and processes up to 1200°C 2190°F.
TUBOTHAL®
Powerful metallic element heaters for use inside all types of radiant tubes, ideally Kanthal APM. Available in standard dimensions from 68 to 170 mm 2.6–6.6 in diameter.

TUBES
Kanthal APM and Sandvik 353/253 extruded radiant tubes for gas- or electrically heated furnaces. Complete assemblies with inner tubes (gas) or suitable electric heating elements. Standard dimensions from 26 to 260 mm outer diameter 1.02–10.2 in.

SILICON CARBIDE
Heating elements in a broad range for use up to 1650°C 3000°F. Manufactured in straight, spiralled, single or multi-shank designs for a variety of heat treatment and melting furnaces. Kanthal SiC is the standard element for production of float-glass.

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KANTHAL MACHINERY
Kanthal Machinery offers a complete range of machines for manufacturing metal sheathed tubular elements and thin walled tubes. Available as either standard or custom built stand-alone machines to complete turnkey factory production lines.

CUSTOMER SERVICE
Kanthal not only offers a complete range of products to generate or protect against heat, but of equal importance is the technical and commercial service we extend to our customers. Examples of this includes advice on choice of material, design of elements, trouble-shooting, design and manufacturing of complete heating systems, development of new elements and alloys, installation service and follow-up.
PRODUCTION

Kanthal is running an integrated production with our own resources for melting, rolling, wire drawing, element manufacturing and finishing operations. It guarantees a high and even quality and a substantial delivery capacity.

0–2000°C 32–3632°F

The Kanthal alloy was invented almost by accident. A forgotten sample in a furnace resulted after years of development work in a completely new resistance material based on iron-chromium-aluminium. In 1931 the new alloy was introduced on the market when AB Kanthal was formed. After the introduction, Kanthal expanded rapidly on the world market and a network of own subsidiaries were set up in all major industrial countries. The original alloy is still there, although improved in all respects. It is now part of a complete product range including other heating materials, precision wires, special alloys, bimetals, ceramic fibres, radiant tubes, high temperature elements and heating systems. The product range covers almost all applications and temperatures. Kanthal is certified according to EN ISO 9001.