#### Heat sinks + accessories



# Content







#### About us

Services

Products:

HEAT SINKS Small + standard	10
HEAT SINK Profiles	14
HEAT SINK Active components	18
ALUMINIUM Cases + design parts	22
ACCESSORIES Thermal interface material	28
ACCESSORIES Mounting	30

4

## About us





# Since 1977: "Solutions for cool results"

Since 1977, we have delivered optimised solutions to meet the most varied component cooling needs.

What you can expect from Alutronic:

- A wide range of standard materials
- The expertise to adapt any standard to individual customer requirements
- The agility to develop completely original solutions such as special aluminium profiles

#### Our strengths are experience and modernity.

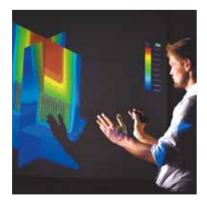
With several decades of experience, we have the ability to identify the best possible solution for your application. Cost-conscious, precise manufacturing and prompt, reliable delivery are our hallmarks. To handle every order to your absolute satisfaction, we have the latest generation of CNC machinery and our own surface finishing (anodising) equipment, supported by an efficient organisation and IT.

Our clients highly value this combination and we take pleasure in rising to the challenge. This has been our recipe for success for 40 years now.

### Services







# Expert know-how and core competence

Reliable component cooling and compliance with defined dimensions at an affordable price. We understand that this is a challenge that can quickly become very complicated.

With thirty five years experience within the market and our exceptional knowledge, Alutronic delivers simple solutions to complex tasks. Our expertise and success is shared with all partners in our network regardless of whether they are customers or suppliers.

#### Alutronic's core competency is machining and anodising aluminium, economically and precisely.

Our in-house expertise is backed up by an established network of specialists. Together we can advise you on the following topics:

- Thermal simulation
- Optimised special profiles
- Laser technology, surface coating
- System components such as fans, heat pipes or Peltier elements
- Fastening techniques such as clip, solder or screw mounting
- Thermal interface material

# Alutronic Anodising







#### Alutronic Anodising: protection and finishing

Improved heat dissipation, increased surface protection and better electrical insulation and decorative finish are all benefits of anodic coating to your components. At the Alutronic Anodising plant we meet extreme demands when it comes to industrial safety, environmental protection and quality.

#### This is achieved with the help of an exceptionally qualified team and state-of-the-art technology.

- Fully automatic anodising lines
- Ultra-modern water recycling systems
- Own frame construction equipment.
- Anodising up to a maximum length of 1,700 mm
- Anodising thicknesses up to 25 microns
- RoHS-compliant chromating
- In-house production and contract anodising

Since 1989, Alutronic Anodising has delivered total quality and one hundred percent human health and surface waters protection. We are exceptionally proud of this achievement.

### HEAT SINKS

1

#### HEAT SINKS Small + standard

Alutronic offers a wide range of standard solutions for cooling semiconductors in standard cases (e.g. TO 220, TOP 3, TO3, etc.) as well as other components in your circuit. All our products are manufactured in-house or sourced from qualified partners.

#### Whether you are looking for customised or standard Heat Sinks, Alutronic can deliver!

We offer the following options for all products:

- Individual surfaces, e.g. anodised, varnished, tinned, printed, etc.
- Individual mounting, e.g. clips, solder pins, adhesive film, threads, etc.
- Individual electrical insulation
- Individual thermal interface

Inner diameter		na mounted by	Dervis neutrolity - Adaptitit (14) - Birchesec(1) - Attention birming (1)	New .
ing Width	۲	Products per sile	- Scree Dr (22) - Bick (12) - Bick (12)	<b>0</b> (10)(0)

www.alutronic.de

#### HEAT SINKS Small + standard

For a concise overview of our product portfolio and to find support for the perfect solution you need please pay us a personal visit, call us by telephone or browse our website at www.alutronic.de.

You can also take advantage of our online search functions. Do you know the type of the standard case? How much space is available for installation? What is the required thermal conductivity? Which mounting technique do you prefer? How much power needs to be dissipated?

You can find the standard you are looking for at www.alutronic.de:

- Finger-shaped heat sinks
- Push-on heat sinks
- Heat sinks for clip or screw mounting
- Extrusion heat sinks, e.g. for processors
- Stamped parts



- IIIII

mm

## HEAT SINKS

# HEAT SINK Profiles

Alutronic offers custom-machined extruded aluminium profiles for cooling all of your power electronics. You can choose from special profiles or a variety of 150 standard sections in stock.

We will help you find the optimal solution – in terms of thermal properties, design and economy – for any application or quantity.

We offer the following options for all profiles:

- Metal cutting, precise and efficient
- High-quality surface finishing in-house
- Optimised profiles based on thermal simulations
- Partial finishing of thermal materials, active components or mounting accessories
- Prototype construction, sample series made from standard material

Filter by product features Width	-	For device			
Inner diameter	•	Heature mounted by	•	- Adopticity	Phillips
Minimum thermal resists	*	Surface		- Bhithesa()() - Alfiasius (mong())	line a
rting Width		• Products	par sile	+ Serve Dr (21) + Back Atochinal (21) + Back (12)	<b>0</b> (12) (14)



www.alutronic.de

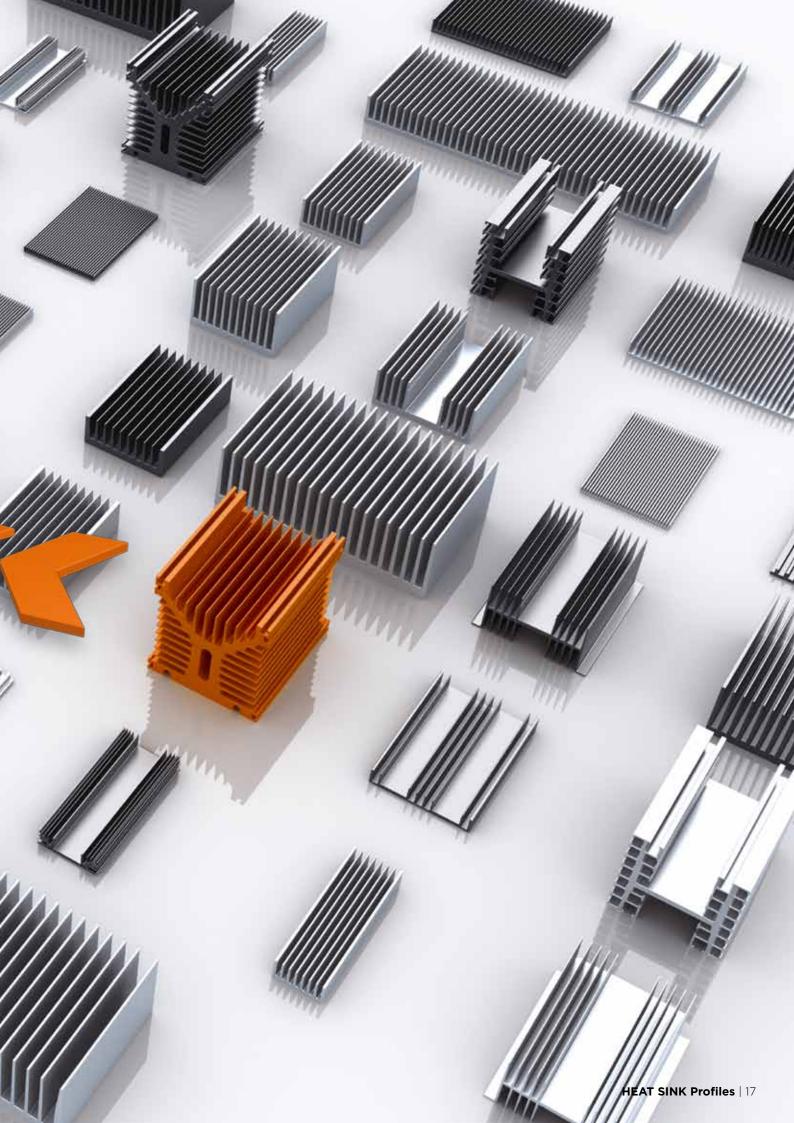
## HEAT SINK Profiles

For a concise overview of our product portfolio and to find support for the perfect solution you need please pay us a personal visit, call us by telephone or browse our website at www.alutronic.de.

You can take advantage of our RthK calculator and extensive online search functions. How much space is available for installation? What is the required thermal conductivity? How much power needs to be dissipated? What about the weight?

You can find the standard you are looking for "off the shelf" as well as information available at www.alutronic.de:

- Ridged profiles
- Other profiles
- Profiles for clip or screw mounting
- Thermal diagrams
- 3D formats to simplify the design



# HEAT SINKS

18 | HEAT SINK Active components

#### HEAT SINK Active components

Alutronic offers a wide range of active and system components as well as solution concepts for cooling your electronics when high power densities are involved and space is limited. These components are ideal when simple, passive cooling is no longer sufficient.

Alutronic can offer you:

- Consulting, thermal simulation and optimisation
- Active components such as fans, heat pipes, Peltier elements, etc. from qualified partners
- Customer-specific design and installation of cooling systems
- Air-to-air or air-to-water heat exchangers in standard or customised designs from qualified partners

Filter by product feature Width	States and states	or device	_			
Inner diameter		eating mounted by		- Allight # (14)	Pygy a	[1] (34)
Minimum thermal resist	•	Uffèce	•	+ Brickesag(1) + Adhesise (mong(1) + Scrive Dr ID1	toire in	- 332
width	*	Products	ar sile	- Back Account (2)		- Öß
					ø	

www.alutronic.de

#### HEAT SINK Active components

For a concise overview of our product portfolio and to find support for the perfect solution you need please pay us a personal visit, call us by telephone or browse our website at www.alutronic.de.

Do you need answers to the following questions: Is only minimal space available for installation? Is the power to be dissipated high and very concentrated? Do your components need to be cooled with extremely low thermal resistance?

The solution to your problem will most likely be a system consisting of several Alutronic components:

- Heat pipes, standard or customised
- AC or DC fans with accessories
- Alutronic lamella cooling units, standard or customised
- Cabinet coolers for switch cabinets and other closed systems
- Heat spreaders and Peltier elements



R

٩

# ALUMINIUM

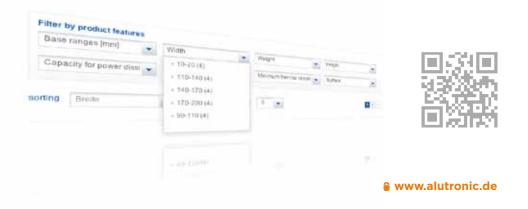
#### ALUMINIUM Cases + design parts

Cooling electronics is just one of several functions performed by aluminium – the thermal function. Aluminium also has mechanical and constructional functions such as joining, protection and decoration or as a mounting surface. Alutronic offers a series of standard materials, backed up by extensive expertise, for manufacturing cases and precision parts.

We can provide you with individual design solutions from a professional and deliver from samples to mass production.

We offer the following options for all cases, case modules and standard parts:

- Metal cutting, precise and efficient
- High-quality surface finishing in-house
- Additional finishing, e.g. powder coating, laser inscriptions, pad printing
- EMC protection materials
- Preassembly
- Prototype construction, sample series made from standard material



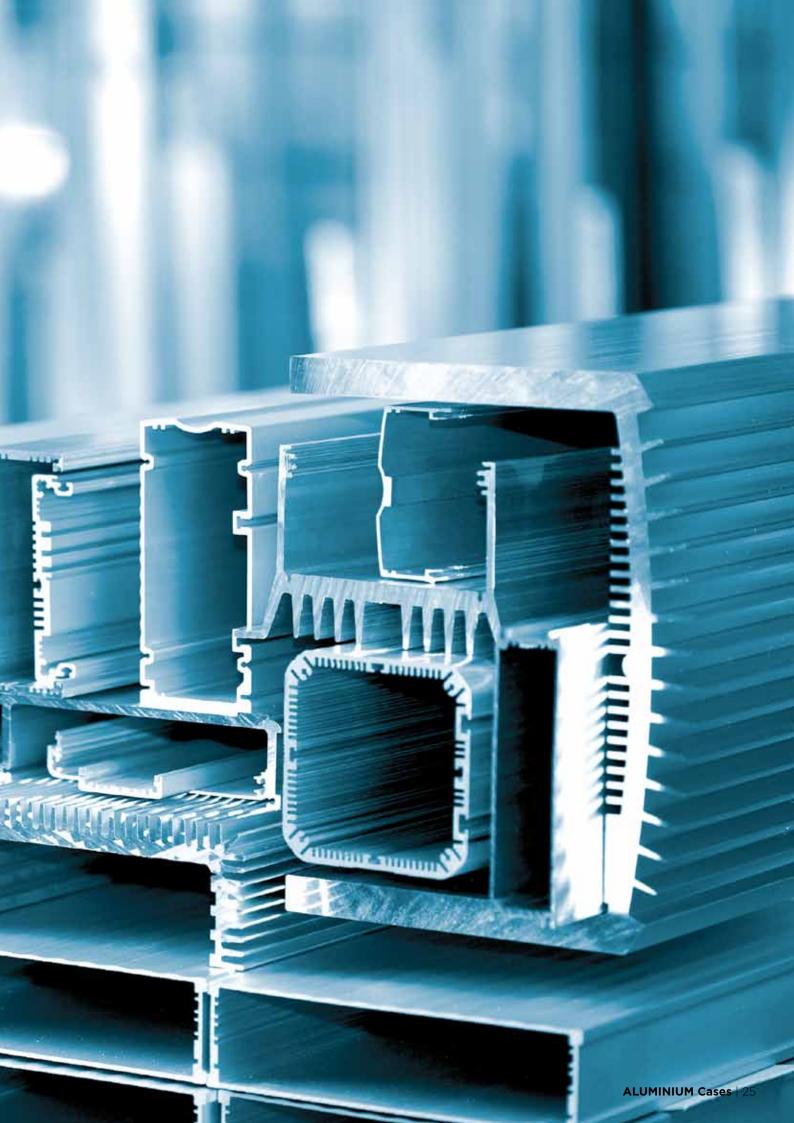
#### ALUMINIUM Cases

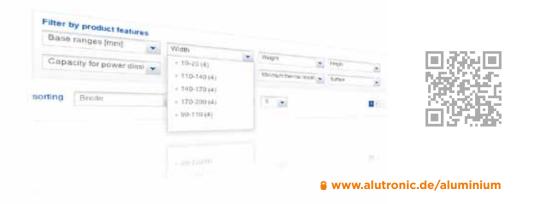
For a concise overview of our product portfolio and to find support for the perfect solution you need please pay us a personal visit, call us by telephone or browse our website at www.alutronic.de.

Why not take advantage of our products and services to ensure the best possible protection for your electronics case.

You can find the standard you are looking for "off the shelf" at www.alutronic.de:

- Shell cases
- Lateral case profiles
- 19" drawers
- Cooling cases (finned surface)
- Combination cases
- Sealing solutions (foaming, cord, etc.)





#### ALUMINIUM Design parts

The aluminium components in your project are usually freely designed or based on standard starting material. We process your components 1:1.

Take advantage of our expertise in aluminium machining and finishing.

We offer a wide range of standard parts – either from stock or sourced from qualified partners. If you supply the material, we can process it. Our definition of standard parts includes:

- "L", "U", "T" or "Z"-shaped profiles
- Square or flat materials
- Sheets and rods

ALUMINIUM Design parts | 27

# ACCESSORIES

28 | ACCESSORIES Thermal interface material

#### ACCESSORIES Thermal interface material

Alutronic can offer you a series of solutions for insulating and ensuring optimal heat transfer to your heat sink.

For a concise overview of our product portfolio and to find support for the perfect solution you need please pay us a personal visit, call us by telephone or browse our website at www.alutronic.de.

We have made-to-measure interface solutions – the right material and the right profile in the right quality!

- Individual laser contour cut
- Partial finishing

hhhahheha

LUTRONIC MEH

You can choose from standard or customised materials and applications:

- Silicone sheets of various kinds
- Aluminium oxide
- Thermally conductive adhesives
- Thermal compounds
- Insulating bushes and caps
- and many more besides

# ACCESSORIES

\$

12.97

# ACCESSORIES Mounting

Alutronic offers a whole series of solutions for mounting your component to the heat sink, attaching the heat sink to the environment or other types of fastening required in your construction.

For a concise overview of our product portfolio and to find support for the perfect solution you need please pay us a personal visit, call us by telephone or browse our website at www.alutronic.de.

With Alutronic you get a secure connection, whether it is standard or customised!

- Distance bolts with individual dimensions and materials
- Individual mounting clips

We offer the following products as standard or customised accessories:

- Distance bolts
- Spacer bolts
- Spring steel mounting clips
- Heat-resistant adhesives (film or liquid)

#### ALUTRONIC Kühlkörper GmbH & Co KG

Auf der Löbke 9-11 D-58553 Halver Tel. +49 2353 915 5 Fax +49 2353 915 333 info@alutronic.de www.alutronic.de

Visit our website for international contacts