

# **ALUMINIUM IN MOTION**







# **GUTMANN, GARTNER, NORDALU.**

More experience, more competence, more benefits, is what the companies of the GUTMANN Group stand for.

Together these three companies provide a unique combination of expertise and services. The Group combines decades of experience in producing premium aluminium products for nearly all market sectors.

GARTNER EXTRUSION GmbH is a market leader in the field of top quality precision profiles with extremely tight tolerances, which are applied, for example, in the fields of pneumatic and electric drive applications. GARTNER EXTRUSION GmbH is also leading in profiles, composite structural components for curtain wall projects as well as component manufacturing for the medical industry and other sectors.

NORDALU GmbH excels in producing profiles with highly decorative surfaces, also used in the sanitary industry. NORDALU GmbH is able to meet the high demands for shape, appearance and functionality by means of special machines developed exclusively for that purpose.

Offering flexibility and a broad range of profiles makes GUTMANN AG a reliable partner for all industries. Furthermore, GUTMANN AG has been a successful provider of building system sections for decades. Customers not only benefit from the very specific competence fields of the individual companies but also from the joint range of services provided by the entire GUTMANN Group.



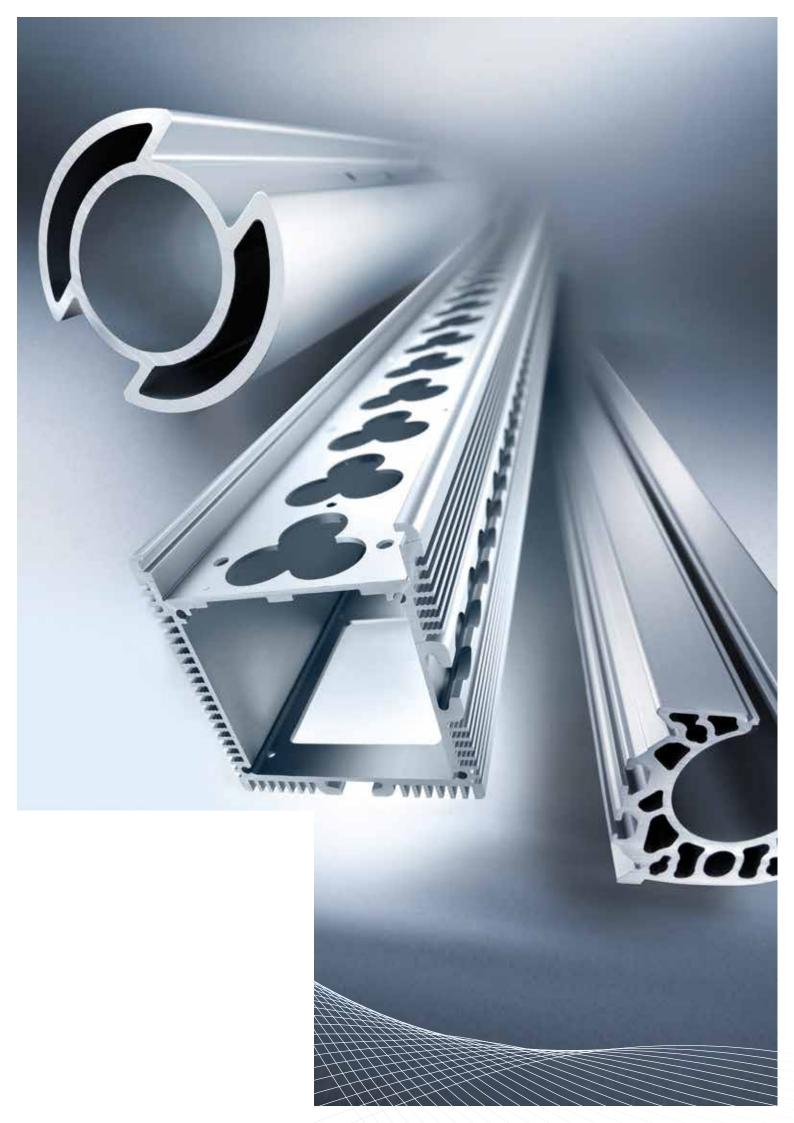
GUTMANN AG, Weissenburg, German



GARTNER EXTRUSION GmbH, Gundelfingen, Germany



NORDALU GmbH, Neumuenster, Germany



# Flexibility and Versatility

Hardly any other corporate association in the industry can offer such a wide range of services from one single source as the GUTMANN Group can.

The services include a broad range of profile dimensions combined with a large number of complementary services such as highly decorative surface finishing, anodized interiors, extensive mechanical processing, component building as well as material and surface inspections in the company's own laboratory. In its own development department, GUTMANN is able to develop systems specific industrial fields of application.

We bundle our capacities and competencies to the benefit of our customers:

- ----- Know-how in all stages of the process chain
- ---> State-of-the-art manufacturing processes
- ---- Powerful extrusion presses of various sizes
- --- Surface finishing equipment for powder coating and anodizing
- --- Various machines and procedures for mechanical processing
- --- Equipment for bending, embossing and thermal stripe bonding
- --- Structural component production and manufacturing of complete components including function tests
- --- Supply guarantee due to an on-site remelting facility

You can count on the advice of our technical experts from the very beginning. The dialogue with customers and prospective customers is a fundamental building block for the quality of our services. Customer requirements may vary, but the possible solutions are just as diverse. The GUTMANN Group develops customized solutions for complex tasks.

	GUTMANN	GARTNER	NORDALU
Production and Capacity			
Number of extrusion presses	3	2	1
Press capacity (MN)	16 / 25 / 35 MN	27 / 27 MN	18 MN
Manufacturing capacities	28,000 tons	18,500 tons	7,500 tons
Technology and Equipment			
Maximum profile dimensions (open)	420 x 70 mm	240 x 50 mm	180 x 20 mm
Alloys	EN AW 3103, 6060, 6063, 6005A, 6082 More upon request	EN AW 6060, 6063, 6005A, 6082 More upon request	EN AW 6060, 6063 EN AW 6005A upon request
Tolerances	DIN EN 12020 and DIN EN 755. Special tolerances upon consultation		
Anodizing	•	•	•
Length	up to 6,800 mm	up to 12,000 mm	up to 6,100 mm
Colours	natural, all bronze tones and black	natural, all bronze tones and black	natural, chemical shine
Yearly capacity	approx. 3 million sqm	approx. 2 million sqm	approx. 1.3 million sqm
Powder Coating	•	•	_
Length	up to 6,000 mm	3,500 to 6,700 mm	_
Colours	all standard RAL colours	RAL colours, special shades and two-coat metallic lacquering	_
Yearly capacity	approx. 2.5 million sqm	approx. 1 million sqm	_
Further Processing			
Sawing	10 mm to 7,000 mm in length	3 mm to 6,700 mm in length	3 mm to 6,150 mm in length
Tolerance field	up to 0.2 mm, smaller upon request	up to 0.2 mm, smaller upon request	up to 0.2 mm, smaller upon request
Cross-sections	max. 600 mm x 240 mm, straight, angled and mitred cuts	max. 320 mm x 150 mm, straight, angled and mitred cuts	max. 200 mm x 150 mm, straight, angled and mitred cuts
Punching	up to 7,000 mm in length, max. press capacity 800 kN	up to 6,700 mm in length, max. press capacity 800 kN	up to 6,150 mm in length, max. press capacity 1000 kN
Drilling	CNC-controlled	CNC-controlled	CNC-controlled
Milling	up to 6,300 mm in length, CNC controlled, 3 and 4-axis	up to 6,700 mm in length, CNC controlled, 3 and 5-axis	up to 6,400 mm in length, CNC controlled, 3 and 5-axis
Chamfering	mechanical brush chamfering	mechanical brush chamfering, vibratory grinding	mechanical brush chamfering, vibratory grinding
Folding	circular bending machine Indumasch PBT 25	_	CNC controlled, 3-roll and faceplate bending machines NC controlled, mandrel bending machin 40 mm diameter
Welding	CNC controlled robots and manual welding stations	_	CNC controlled robots and manual welding stations
Foiling	up to 6,000 mm length, profile cross- sections upon request	up to 6,700 mm in length, max. profile width 150 mm, exceptions upon request	_
Degreasing	small parts washing system	small parts washing system	small parts washing system
Thermal Stripe crimping	_	up to 9,000 mm, offset and corner joint up to 9,000 mm	_

# From structural component manufacturing to finished product.

To us, the acquisition, assembly, or manufacturing and packaging is next to production a matter of course.

Design & Technology - Office supplies, timeless and aesthetically pleasing. GUTMANN AG produces elegant door plates in 20 different designs, already fully assembled, packaged, and ready for sale. The table display stands were developed in different sizes and are characterized by their smart design and the many different applications. The crystal-clear acrylic plates - in combination with the high-quality aluminium base - have stability and durability and give an elegant appearance. The displays are applicable in various ways and suitable for use as menu card holders or for product labelling at the point of sale. Replacement of information is possible at any time – quickly and easily.

The FIRST AID BOX made of premium aluminium is easily accessible when needed and protects the contents from soiling, moisture and high temperatures. The elegant design makes it fit perfectly in every modern environment. GUTMANN AG supplies the aluminium profiles – already sawed, punched and anodized – for this product.

Everything from one source – GARTNER EXTRUSION GmbH fully manufactures a lung analysis cabin (see image below) used for medical diagnosis. Component manufacturing, including purchasing outside supplied parts, is one of the core competencies of GARTNER.

GARTNER developed an assembly line specifically for this complex product. Zero-defect quality is an absolute must in medical engineering so doctors and patients can fully trust the functionality of the devices they use.





Setting standards.

Especially in mechanical engineering, aluminium as a raw material convinces through high precision and an extreme continuous load.

Combined with good corrosion resistance, these complex properties can be tailored precisely to the respective application. The advanced tool technology allows the customer to develop a powerful product at an economical price.

The GARTNER EXTRUSION GmbH manufactures cylinder and piston profiles for pneumatic cylinders. Due to its oval design, the low profile is what is so special about this mechanical application. In this case aluminium as a material allows an extreme mechanical continuous load. In addition, it meets the requirements of close tolerances, delicate details, good machining properties, corrosion resistance and modern design.

During the modernization of its manufacturing area, a customer of GARTNER EXTRUSION GmbH switched the production of folding rulers from casting to extrusion profiles. Now even small quantities in different variations can be manufactured cost-effectively. The requirements of tolerances during extrusion are just as high as they are for processing and surface quality of the aluminium profile.

GARTNER EXTRUSION GmbH manufactures pneumatic drives for various applications in automation technology. The cylinder profile without piston rods manufactured by GARTNER ensures high performance even in the smallest of spaces. The aluminium profiles must have extreme tolerances, low coarseness in cylinder drilling, durability, and a modern design. Anodizing reduces wear and tear, especially from mechanical abrasion.

In Weissenburg, GUTMANN AG manufactures aluminium profiles used as frame profiles for cooling devices in track vehicles. The aluminium profiles are especially suitable for this purpose as they conduct heat well. For the welded structure, elaborate CNC-processing is necessary.



Piston rod cylinders (Mechanical Engineering)

# Our customers are the best reference.



#### --- Profile

for the membrane of the roof structure of the Allianz Arena in Munich. 2,800 rhomb-shaped, transparent air cushions for an area of approx. 60,000 square meters with 1,400 different rhomb-shaped sections.

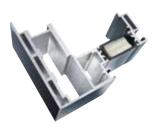
- Building & Architecture
- --- GUTMANN AG



#### - Curtain wall profile

GARTNER EXTRUSION GmbH also supplies premium curtain wall profiles with thermal break and highly decorative, durable surfaces for the "One Hyde Park" in London.

- Building & Architecture
- ← GARTNER EXTRUSION GmbH





- The King Abdullah financial district (KAFD) is emerging north of the city centre of Riyadh and forms the new financial district of the Kingdom of Saudi Arabia. GARTNER supplied a total of 1,800 tons of profiles for four of the architecturally impressive buildings\*. The high-quality aluminium profiles with their complex cross sections were produced by GARTNER EXTRUSION and refined with a decorative, highly weatherproof paint. Ideal insulation values of the facades are achieved by means of thermal separation of profiles.
- Building & Architecture
- ← GARTNER EXTRUSION GmbH

<sup>\*</sup> On behalf of the Josef Gartner GmbH



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#### Coca-Cola-Beatbox, London

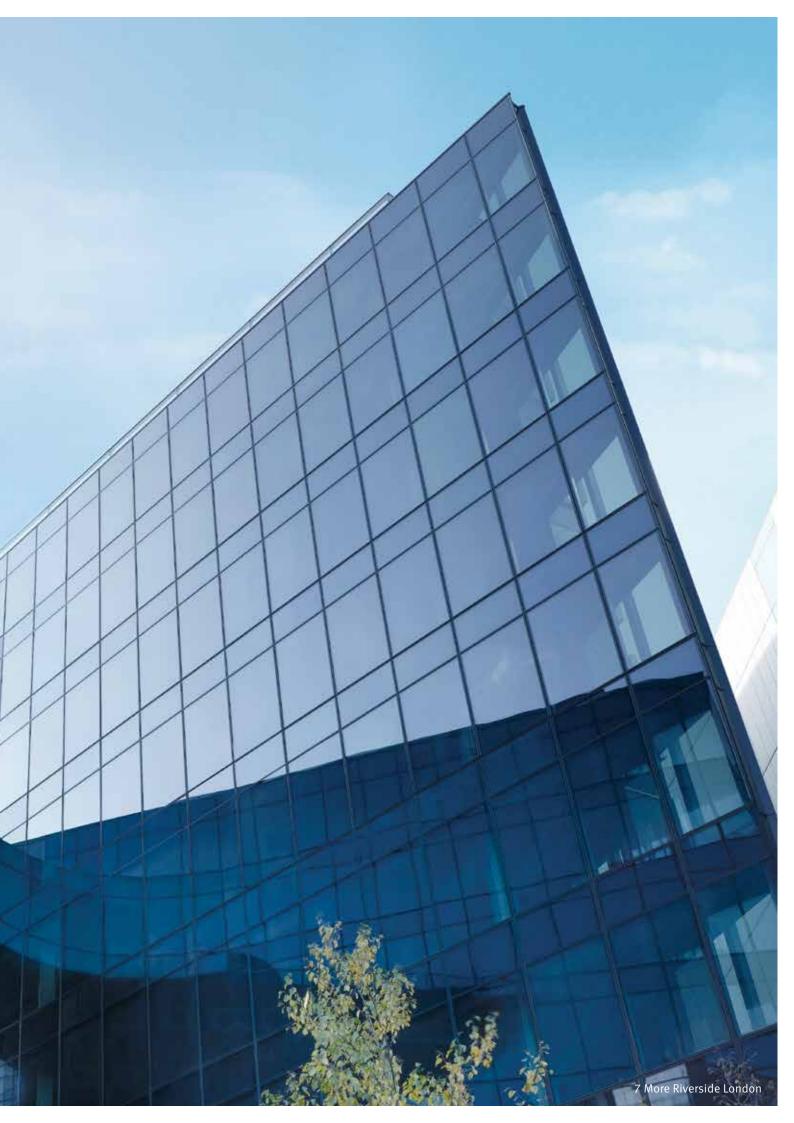
Globally, GUTMANN profiles shape the facades of new, impressive buildings in the construction industry. The latest example of this is the Coca-Cola Pavilion in London. 3 types of profiles were produced for the pavilion on the occasion of the Olympic Games, resulting in an order quantity of 100 tons in total. It only took 6 weeks from the drawing to the fully edited series profile. This is how the GUTMANN Group defines flexibility, understanding the market, and skillfulness.





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#### $\leftarrow \textbf{Supporting beam for roof racks}$

The anodized, aerodynamically shaped aluminium profile serves as a supporting tube beam for the roof rack of the vehicle series AUDI A1, A3, A4, and A6.

- $\leftarrow {\sf Transport} \ \& \ {\sf Transportation}$
- <── GUTMANN AG



### $\leftarrow \textbf{Seat frames for train seats}$

Aluminium profiles serve as a base for passenger seats in trains. High demands exist on ergonomics, ease of use, comfort, and safety.

- $\twoheadleftarrow \mathsf{Transport} \ \& \ \mathsf{Transportation}$
- --- GUTMANN AG



#### - Aluminium rudder blade

It combines stability, precision and high weather resistance. In this way, sporting success is possible also when used under extreme loads.

- Transport & Transportation
- ← GARTNER EXTRUSION GmbH







#### † Hybrid storage

GUTMANN supplies aluminium profiles for the hybrid storage of the BMW series 3, 5, and 7 Active Hybrid. The cooling profiles ensure heat removal from the battery cells.

- --- Transport & Transportation
- ---- GUTMANN AG





Radiator (exterior view)

Radiator (interior view)



#### $\leftarrow Aluminium \ pipe \ clamp$

This pipe clamp is protected as a utility model, which is available in 39 different diameters ranging from 33.7 to 154 mm. They connect laterally joined pipes, which transport all types of granules in the food industry as well as in the plastics industry.

- --- Mechanical Engineering
- ⊹-- GUTMANN AG





#### - Profile folding ruler for automatic joggers

Price advantages are given over previously used parts made of cast iron. High demands on tolerances regarding extrusion, machining, and surface properties.

- «-- Mechanical Engineering
- GARTNER EXTRUSION GmbH





#### - Adjusting pipe for vacuum cleaners

NORDALU GmbH is able to meet the high demands for shape, appearance and functionality by means of special machines developed exclusively for that purpose.

- <-- Metal goods
- ← NORDALU GmbH





#### - Sunbeds

The highly decorative profiles of GUTMANN AG have a very extensive production process. Welding must be executed with the utmost of care, because even the smallest irregularities are visible under UV light. Profiles are completely CNC machined and anodized. In addition, the design of special tools is necessary because of the very high demand on the surface.

- Electrical Engineering
- <--- GUTMANN AG





#### - Multiple socket outlet

The multiple socket outlet DESK 2 is designed for flexible use in the office, in meeting rooms, in home offices or desk sharing situations.

DESK 2 combines elegance, design and functionality. The multiple socket outlet is made from high-quality aluminium and therefore has a stiff rigidity and is durable.

- red dot design award 2011
- IF Product Design Award 2012
- Nominated for the German design award 2012
- Electrical Engineering
- «--- GUTMANN AG



#### $\leftarrow Stroller$

This comfortable stroller is made of weather proof aluminium. All technical features are hidden in the aluminium frame and therefore make care and maintenance much easier. The stroller also impresses with its minimal weight.

- Structural component production
- <-- NORDALU GmbH

STOKKE® XPLORY®

Design: Bjørn Refsum/Hilde Angelfoss Øxeth

Design development in cooperation with K8 Industridesign AS

Product development in cooperation with Bård Eker Industrial Design AS

## → Building & Architecture









# ---> Transport & Transportation









## --- Mechanical Engineering







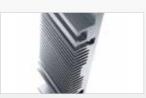


# ---> Electrical Engineering









## → Additional Fields











# High quality standards, a precept of our own.

We do not settle with achieved standards – we go further.



The GUTMANN Group possesses the following certificates:

GSB, Qualicoat, Qualanod, Ü-Zeichen, DIN EN ISO 9001, ISO/TS 16949, DIN EN ISO 14001, DIN EN ISO 22000

We never stop raising our standards. Being good inspires us to become even better. As part of our quality management, we continuously re-evaluate and improve our services, our customer focus as well as our own technical, social and personal competency in order to optimise the quality of our overall work. Our internal quality assurance system guarantees that only flawless components are passed on to the next processing step. The result: highly precise and functional products, which can be incorporated smoothly into our customers' manufacturing processes.

We are especially dedicated to resource-saving manufacturing. First and foremost, this means using our aluminium material economically and gearing our manufacturing process towards recycling.

Our goal is to operate in closed and loss-free circuit production and material flow. Any aluminium scrap accumulated during manufacturing is melted in our own remelting facility. In the subsequent casting process, high-quality aluminium billets are created for the production of our aluminium profiles.

Any residual materials from surface finishing are transformed and recycled into marketable products using procedures designed exclusively for that purpose.

This not only reduces the amount of residual material but also contributes to lowering CO<sub>2</sub> emissions.

In July 2009, the Society for the Study and Support of Economy in Schleswig-Holstein/Germany honoured these efforts with the "Environmental Economy Award".





#### **GUTMANN** Group - Sales and Service

You can rely on our services worldwide. We have a nationwide sales and distribution network in Austria, Greece, the Middle East, and Switzerland. Our contact information can be found in the attached Sales and Distribution Overview, which we update regularly.

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