



ROSA for the  
environment

# WE CARE ABOUT THE NATURAL ENVIRONMENT

We have been designing and manufacturing outdoor lighting for **30 years**. We specialize in the production of aluminum columns and LED luminaires, as well as integrated lighting systems. Our products can be used in both public and private spaces.

We are aware of the fact that our business decisions have impact on our environment. Therefore, the principles of sustainable development have been an important element of our strategy for many years. **We monitor all processes in our company to eliminate activities that have a negative impact on the natural environment at every stage of production. We are working on introducing innovative solutions that not only meet the needs of our customers, but can also be used by them without fear of climate pollution.**

We feel responsible for the environment in which we live. We are a Polish family business and we want our employees' children to enjoy the good of a clean natural environment. **Our goal is to pursue a circular production model. We want to provide the market with durable and innovative products that will ensure savings and a better quality of life.**



Park Rybaczówka in Strzelce Opolskie

The photovoltaic installation located on the roof of the production hall generates annually over **200 000 kWh** of electricity.

In addition to standard solutions commonly used in production plants, such as a waste water neutralizer, air purification system, devices reducing energy and water consumption, ROSA has implemented investments that significantly reduce the negative impact on the climate

**Combined heat and power (CHP) cogeneration unit** – used in the production of electricity which is generated, among others in three cogeneration unit powered by natural gas, combustion of which is not harmful to the environment. We use waste heat from cogeneration in the anodizing process, or, depending on current needs, to heat rooms and prepare domestic hot water and in the summer

season, in the trigeneration process, cold is generated from waste heat, which allows to lower the temperature in production halls without the need to use destructive refrigerants ozone layer, as it is the case with classic air conditioners. *This solution allows for high energy savings and a significant reduction in the emission of pollutants into the atmosphere.*

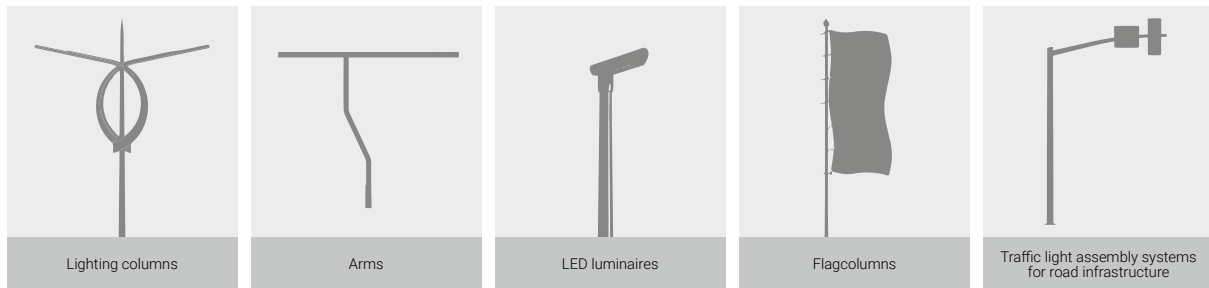


**Photovoltaic panels** mounted on the roof of our plant, which allow us to reduce energy consumption from the traditional grid.

**Heat pumps**, thanks to which the heat recovered from the production line is used to heat water and in winter also heat rooms.

# ROSA LIGHTING ECOLOGICAL, ECONOMIC AND ENERGY-SAVING

at ROSA Group, we use aluminum profiles to produce complete outdoor lighting systems:



It is no coincidence that the main material we use to manufacture our products is aluminum - a leader among eco-materials



The high quality of anodized surfaces is confirmed by the QUALANOD certificate (certificate No. 1806), which the ROSA Anodizing Plant has received from the Association for Quality Control in the Anodizing Industry.

Aluminum is the third element found in nature, after oxygen and silicon. Bauxite ores are used for its production. The excellent properties of aluminum: low weight, plastic properties and high corrosion resistance make it a universal material used in many branches of the economy. **Thanks to these advantages, aluminum is also considered the most ecological construction material:**



**the lightness of aluminum** enables the construction of a structure with a weight of almost 45% lower than that of traditional

steel structures, which has a direct impact on the economic transport and assembly, and this translates into reduction of fuel consumption and reduction of CO<sub>2</sub> emissions.



**corrosion resistance means greater durability and longer life of the products and construction.** ROSA additionally

strengthens the corrosion resistance of its products by the anodizing process, which consists in creating an oxide layer (Al<sub>2</sub>O<sub>3</sub>) on the aluminum surface with greater hardness and corrosion resistance than the naturally formed coating. Thanks to this, anodized ROSA products become more resistant to scratches, resistance to harmful external factors such as salt, UV, atmospheric precipitation (acid rain), pollution from means of transport or industry (dust, oils) and acquire an aesthetic, metallic appearance.



thanks to the anodizing process, products can be directly recycled - in the case of painted coatings, it is necessary to clean the material in advance, which is an additional

burden on the environment (emission of sewage, waste, hazardous gases and dust).

**After a minimum of 50 years of use, anodized aluminum columns and fittings of the ROSA brand can be 100% converted into new products.**

Processing aluminum does not decrease its parameters and quality, and material losses during recycling amount to about a few percent. Aluminum is a material with infinite life.

## SAL-5/B60

(height 5m)

**weighs 14.2 kg,**

which is as much as four average watermelons





ROSA aluminum anodized columns have a significantly higher corrosion protection compared to untreated aluminum columns. As a result, the service life of ROSA aluminum anodized columns is at least 50 years.

# ROSA COLUMNS „LIVE” MINIMUM! 50 YEARS

**All aluminum columns manufactured by ROSA are anodized.** The exceptional durability obtained thanks to the anodizing process ensures increased durability of the aluminum columns in relation to columns not subjected to this treatment.

The service life of at least 50 years in terms of corrosion of anodized aluminum columns of the ROSA brand is confirmed by the Technical Approval issued by an independent expert of the Association of Mechanical Engineers and Technicians in Poland.

## CARBON FOOTPRINT LIGHTING COLUMNS

ROSA has studied the carbon footprint of aluminum and steel columns. The results of the research undoubtedly indicate that the production process of anodized aluminum columns, compared to the production process of galvanized steel columns, is characterized by significantly lower CO<sub>2</sub> emissions into the atmosphere, making them much more climate-friendly products.

The carbon footprint research was carried out by Bureau Veritas Polska, an internationally recognized research unit. The aim of the study was to calculate the carbon footprint that arises from the extraction of raw materials to the production of columns, their transport and disposal. The study took into account the data on the production of columns of different heights in order to fully obtain information on the ROSA product range.

*It is well known that aluminum is an environmentally friendly material - explains Stanisław Rosa, the owner of the Rosa Group - However, we wanted to obtain reliable data confirming that the use of products that we manufacture in our plant in Tychy can actually have a real impact on reducing CO<sub>2</sub> emissions to the atmosphere. This is very important information for our customers who, by using our products, can evaluate the achievement of their own climate protection goals*

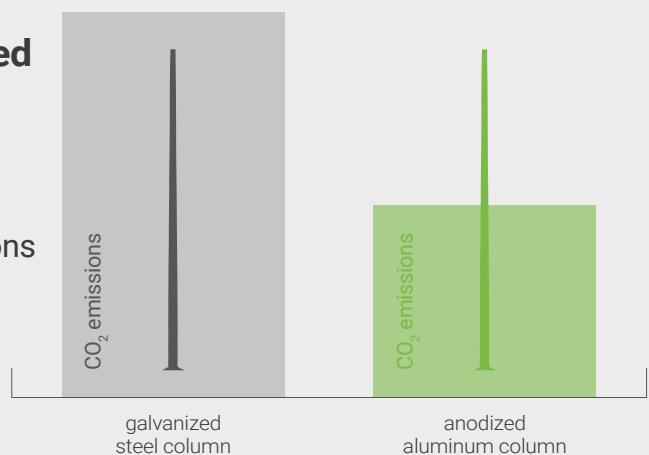
The test results clearly show that during the production of one galvanized steel column, 50% more CO<sub>2</sub> is generated than in the production of one anodized aluminum column.

The carbon footprint study for the ROSA brand was carried out by the research company Bureau Veritas Polska in accordance with the standard The GHG Protocol Product Life Cycle Accounting and Reporting Standard.

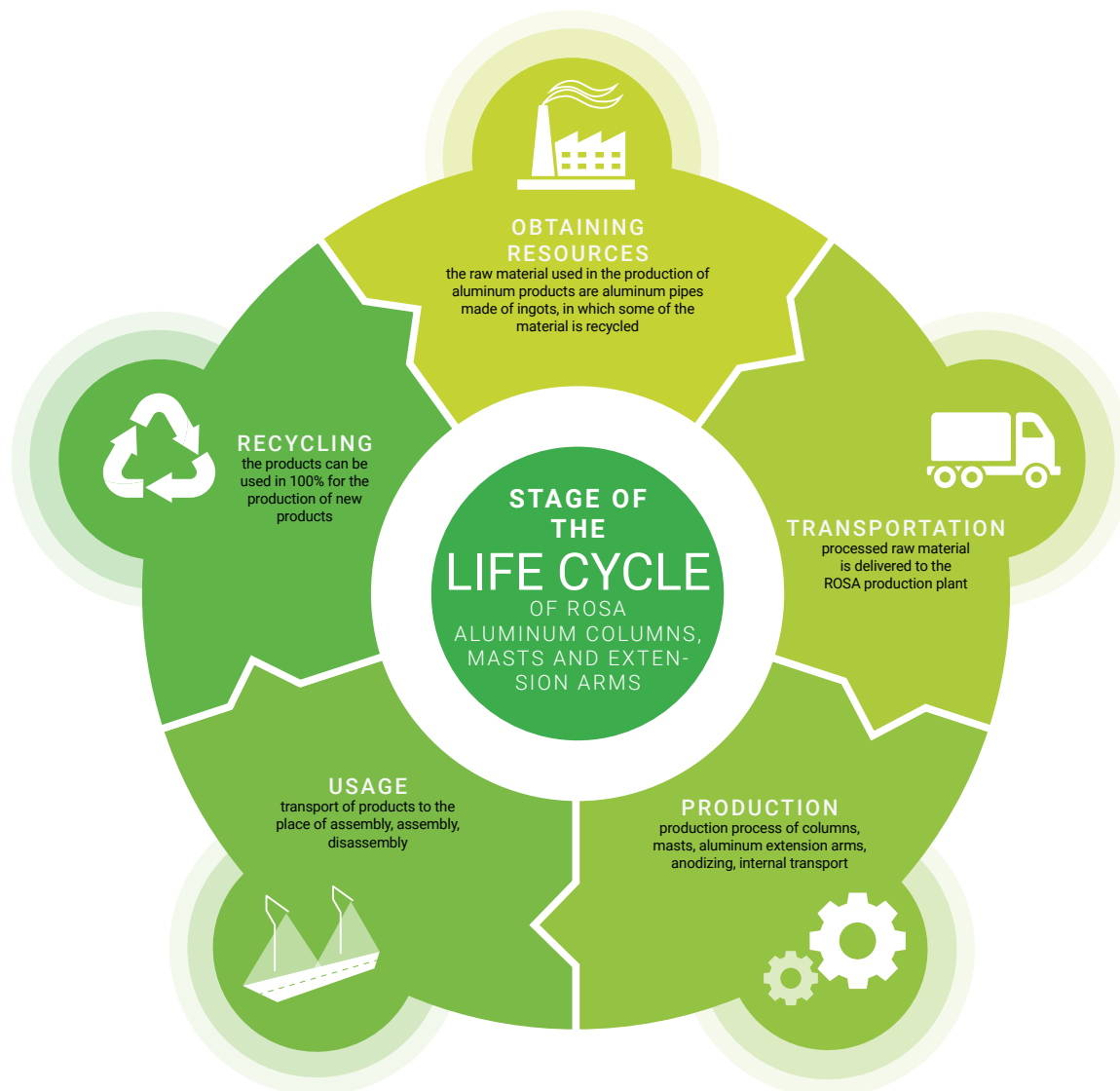
**The production of a galvanized steel column is**

**37,7%** higher  
CO<sub>2</sub> emissions

compared to an anodized aluminum column



# CIRCULAR ECONOMY



# ROSA TAKES CARE OF EDUCATION IN THE FIELD CORRECT LIGHTING

ROSA's activities in the field of ecology are not limited to the use of solutions that reduce the negative impact of production on the natural environment and the marketing of products that reduce CO<sub>2</sub> emissions. ROSA specialists ensure that each project is prepared in accordance with applicable standards and recommendations for proper lighting. We make sure that our lighting systems are not selected randomly, but based on specific calculations that take into account the properties of a given investment

and the guidelines contained in applicable standards. The ROSA Training Center located in Tychy at 54 Towarowa Street is a place perfectly adapted to acquiring knowledge about lighting. In addition to modern conference rooms, the center has a research laboratory, showroom, and the vicinity of the production plant allows you to learn about the process of creating ROSA products.



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