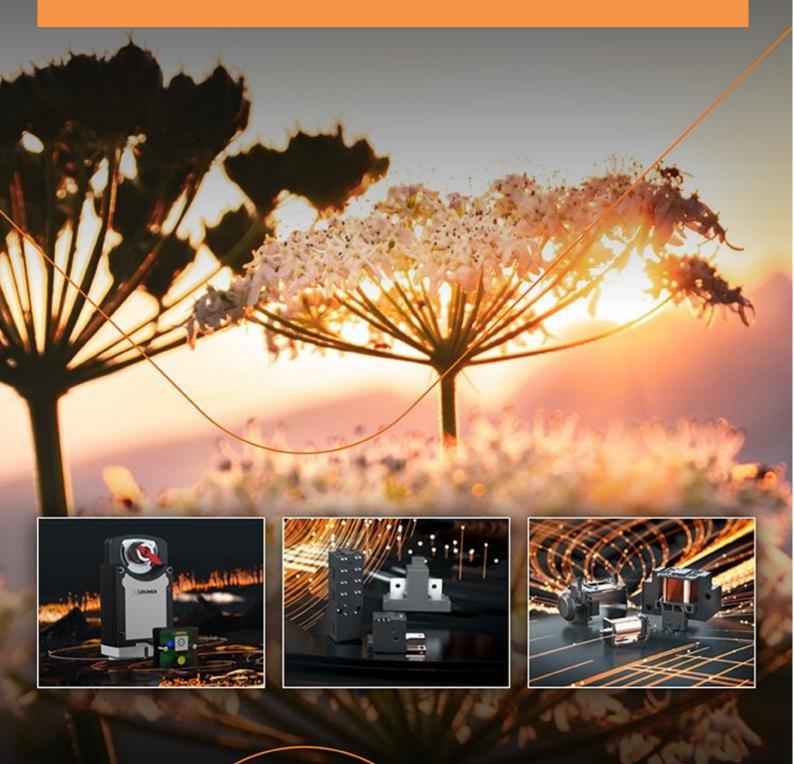


## **ENVIRONMENTAL STATEMENT 2023**

**GRUNER AG WEHINGEN - DATA UNTIL THE END OF 2022** 



gruner.de



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#### 1 FOREWORD

Dear readers,

This environmental statement summarises the environmental performance of Gruner AG over the past few years. The most important basis for the continuous improvement of our environmental performance is our functioning environmental management system at the Wehingen site and the sustainable economic success achieved by the company.

We see our environmental management as an ongoing process that we work on continuously in order to constantly improve.

With this environmental statement, we can transparently document that we have lived, maintained and sensibly developed our system. This can be recognised above all by the "hard" facts of our environmental balance sheet. We will continue to face up to this responsibility in the future and actively work on development, not least through a well-established internal audit system, which we use to review the targets and activities we have set ourselves at regular intervals.

As part of the environmental management system, we as a company not only want to comply with and improve environmental aspects ourselves, but also want to inform the public and our employees about our activities. Employees are kept informed about the developments and plans of Gruner AG through staff meetings, our staff magazine and notices on information boards.

We will continue to work intensively on solutions to further optimise our processes and products in the future. We are increasingly integrating the aspect of sustainability into our daily thinking and actions and at the same time endeavour to continuously sensitise all our employees to the areas of the environment and sustainability. As part of our agile teams and our company suggestion scheme, all employees have the opportunity to actively contribute to our environmental management system and support it with their ideas and potential for improvement, thus helping us to move forward.

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#### 2 PRESENTATION OF GRUNER AG



FIGURE 1: AERIAL VIEW OF THE CERTIFIED SITE IN WEHINGEN

Since the company was founded in 1953, we have succeeded in tapping into new technologies and continuously developing both these and ourselves. Today, we employ around 400 people at our headquarters in Wehingen in south-west Germany. Our range of products and solutions covers a wide variety of applications in the automotive, technical building equipment and automation sectors.

Since the company was founded by Wolfgang Gruner in Wehingen in 1953, the company has succeeded in achieving a leading position in highly competitive markets. After an assembly plant was set up in Tunisia in 1977, a new era began in 1982. With the arrival of Eduard Spreitzer, the product portfolio is consistently reorganised and streamlined. The unique expertise in relays, solenoids and actuators once again becomes the basis for penetrating promising market niches.

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The first bistable relays were launched in 1985, followed by ISO 9001 certification in 1996 and ISO/TS 16949 ten years later. At the same time, a subsidiary was founded in Serbia. Milestones include the series launch of the 750H battery isolating relay and the development of a lumen current sensor for actuators, which is honoured with a major innovation award. In 2009, Gruner opens its third foreign plant in India. Today, Gruner employs around 1,500 people worldwide. The course is therefore set for further growth - through sustained high investment in technologies, buildings and employees. Following customers and markets technologically and geographically remains a key perspective for the future.

Our product portfolio includes the following three categories:

• Actuators



FIGURE 2: EXTRACT FROM OUR PRODUCT RANGE OF ACTUATORS

Actuators have been an important product area for the company since 1954. Gruner has succeeded in establishing a seamless portfolio that is constantly gaining market share. All models represent both cost efficiency and the greatest possible flexibility in building management. From classic to volume flow control, from high-speed to spindle drives: there is a suitable product for every requirement. Committed to consistent customer orientation, Gruner also provides a range of OEM-specific models of rotary and linear actuators. Customised - and always according to the motto "competent, flexible, friendly".

Typical applications include the setting and control of dampers and valves, mixed air boxes, jalousie, smoke and flue gas dampers or motorised valves. All actuators comply with DIN VDE standards.



standards and CE directives. UL versions are also available. In general, Gruner actuators include motors (BDC, BLDC) for safe shutdown in the event of overload and can be equipped with synchronous or stepper motors on request. Gruner also offers the greatest possible freedom of choice when it comes to control, supply, options and accessories. Gruner develops the entire mechatronics (mechanics, circuit technology, software) completely in-house.

Magnets



#### FIGURE 3: EXTRACT FROM OUR PRODUCT RANGE OF MAGNETS

Gruner solenoids are at the forefront of the field. Developed on a customer-specific basis, they fulfil the diverse challenges of demanding users. In short: Wherever actuating solenoids are used to realise linear pulling or pushing functional sequences, the well-founded, specialised know-how becomes a decisive advantage. Positioning, holding, redirecting. Ejecting or locking.

In addition to linear solenoids, impact solenoids, holding solenoids and hinged armature solenoids, it offers a wide variety of designs. As the requirements of the target sectors - automotive, heating-ventilation-air conditioning and mechatronics - differ in detail, the development of customised solutions is a particular focus. The spectrum spans such contrasting fields of technology as engine management and transmission control, hot and service water control or even access authorisation and card reading systems. Gruner always succeeds in enriching solutions with customised developments.

Gruner has been developing customised electromagnets for more than 50 years. Thanks to its simple design, the electromagnet is a cost-effective actuator for a wide range of customer requirements. Electromagnets are used for functions such as positioning, ejecting and locking,

## Environmental Statement 2022



Diverting, clamping, blocking and holding. In the automotive sector, Gruner electromagnets have a positive influence on safety, the environment, comfort and operability in the ambient temperature range from -40 °C to +105 °C. In car interiors, Gruner solenoids switch and move quietly in gear selectors and in drive authorisation systems. Electromagnets are suitable for all these functions, but they must be customised to meet the customer's specific requirements.

Relay



FIGURE 4: EXTRACT FROM OUR PRODUCT RANGE OF RELAYS

With a long and successful tradition, Gruner is one of the world's last independent manufacturers of relays. In many cases, Gruner products are now required by the industry. A fact that confirms and justifies the company's claim - innovation instead of imitation - on the market. The company is the undisputed technology and world market leader in the field of bistable relays for energy management.

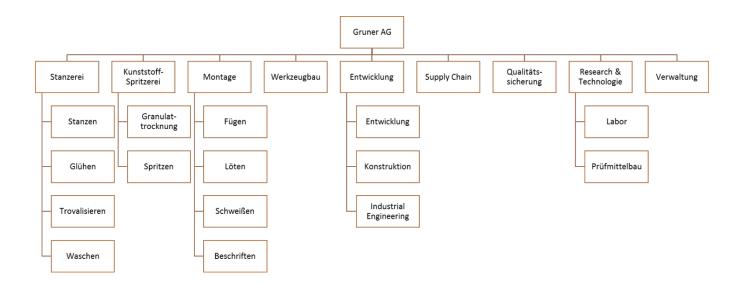
Thanks to their outstanding performance features and many standardised components, bistable relays from Gruner are predestined for a wide range of applications. They are required, for example, in ripple control receivers and soft starters, in load management, the prepayment sector and also in automotive battery management.

They impress with their high switching performance with reduced energy consumption, maximum switching reliability with a long service life and absolute reliability with a minimum of mechanical components. Like all Gruner solutions, they combine functionality and economy in perfect syn- thesis.



Intelligent, production-accompanying test systems for 100% testing, years of refinement of identical design principles and the integration of genuine innovations ensure that the Gruner relay brand retains its qualitative edge in the future.

To provide an overview and a better understanding of our company, the following diagram illustrates the processes at our site in Wehingen:



#### FIGURE 5: PROCESS OVERVIEW OF GRUNER AG AT THE WEHINGEN SITE

The vertical integration of Gruner AG becomes clear at a glance here. Our products and tools are initially designed and developed in-house. This is followed by the use of our tools in the injection moulding, winding and punching shop, where the individual parts are produced accordingly, which are then assembled, fitted and later tested in the assembly department. An important and continuously supporting process here is quality assurance.



Occupational safety and environmental protection have been an important part of our corporate philosophy since the 1990s. It has been a concern to reduce labour and environmental pollution in any form to a minimum and to conserve resources. E.G:

- Constant attention was paid to the substitution of hazardous substances.
- Scrap has always been collected separately and sent for recycling.
- Copper reworking began in the mid-1990s.
- The waste was collected separately.
- Rainwater utilisation was started in the mid-1990s.
- A heat pump for process heat was installed in 2007.
- The heat from the compressors has been utilised since 2008 and 2011 by installing heat recovery systems.

Since the Gruner company was founded, a residential area has developed around the company premises. In order to avoid conflicts with the neighbours, efforts are made to keep the impact as low as possible. The buildings of the company expansions were designed accordingly. Neighbours were particularly involved in this measure in advance. A number of comments were taken on board and implemented (car park demarcation, route of paths, etc.).

Following the establishment of the environmental management system in 2016, environmental protection is also firmly anchored as support for all other processes. Furthermore, production is supported by administrative processes (such as procurement and sales) and the supply chain (logistics / shipping), as well as being designed, planned and optimised via industrial engineering.



#### 3 ENVIRONMENTAL POLICY GRUNER AG

Environmental protection is an important corporate goal at our company in Wehingen; we want to contribute to reducing the burden on the environment. The endeavour to protect the environment is an obligation for our company towards our customers, our fellow human beings and future generations.

With our environmental management system and the active participation of all employees, we want to contribute to sustainable development at our site in Wehingen. When organising our environmental management system, we also take into account current developments in our company's environment as well as the expectations and needs of interested parties.

For us, corporate environmental protection means taking a holistic view of operational processes, analysing them and integrating environmental aspects as far as possible. This enables us to conserve resources and minimise our impact on the environment.

We comply with the binding obligations relevant to us and are also committed to continuously improving our environmental performance. We base all environmental protection measures on the best available and economically viable technology.

We achieve successful environmental protection through the involvement of managers and the proactive participation of all employees. This is why we inform every employee so well that they can take direct responsibility and actively "live" environmental protection in our company.

We want to maintain an open and objective dialogue with our business partners, neighbours, the authorities and other interested parties about the environmental impact of our operations and are open to suggestions for improvement.

When procuring our raw and auxiliary materials as well as the design, packaging and delivery of our products and services, we observe ecological criteria wherever possible and economically justifiable. We favour suppliers who place a similarly high value on environmental protection as we do ourselves.



#### 4 ENVIRONMENTAL MANAGEMENT SYSTEM

Gruner AG's environmental management system is essentially determined by the environmental team, the environmental management manual, which provides an overview of the system, and employee involvement.

#### 4.1 SCOPE OF APPLICATION

The environmental management system applies to Gruner AG in Wehingen with all existing functions and processes.

#### 4.2 ENVIRONMENTAL MANAGEMENT OFFICER

Our Environmental Management Officer is responsible for the implementation, maintenance and continuous improvement of the environmental management system, including documentation in accordance with relevant environmental standards for Gruner AG. The main tasks are therefore

- 1. Implementation of the environmental policy and environmental targets and monitoring the extent to which the environmental targets have been achieved
- 2. Creating, managing and updating the documentation of the environmental management system
- 3. Preparation of the review
- 4. Organisation and implementation of internal audits and tracking of corrective and improvement measures
- 5. Coordination, organisation and monitoring of external certification audits
- 6. Updating, documenting and implementing the environmental programme
- 7. Annual update of the environmental impact assessment
- 8. Regular determination of the currently applicable environmental law requirements and the regulations associated with the Eco-Audit Ordinance
- 9. Updating the environmental statement
- 10. Training and information for employees to prevent or minimise environmental pollution
- 11. Participation in management meetings



#### 4.3 ENVIRONMENTAL TEAM

The environmental team is made up of the environmental management officer and various employees from different areas. The areas of communication and employees, fire protection, occupational safety, maintenance, etc. are covered. The aim of the environmental team is to identify and drive forward improvements to Gruner's environmental performance. The team meetings are held in fixed cycles and the actions are documented on the corresponding team board.

In addition to the environmental team, environmentally relevant topics are discussed and dealt with in the agile teams.

#### 4.4 DEVELOPMENT AND DOCUMENTATION OF THE ENVIRONMENTAL MANAGEMENT SYSTEM

The regulations of our environmental management system are described in our environmental management manual and other applicable documents. All applicable documents are referenced in the environmental management manual (with storage location). The environmental management handbook and other standard documents are processed, checked and released in an electronic document management system. Records are stored on the server.

#### 4.5 EMPLOYEE INVOLVEMENT

Communication with our employees and within our company is a key element of our environmental management system. We have therefore laid down rules for internal communication in the environmental management manual.

The topic of environmental protection was integrated into the existing internal suggestion scheme "GRISU". grated.

We use the following means for internal communication:

- Meetings
- E-mail circular
- Notices (notice board)
- Staff meetings
- Newsletter / Reports in HR-News
- "GRISU" proposal system

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- Defect control loop / autonomous maintenance
- Shop floor boards (MS Teams)

Before the environmental management system was introduced, all employees were asked to take part in a survey on the company's strengths and weaknesses in the area of the environment. A new employee survey was conducted in 2022 in order to give all employees the opportunity to express their opinions directly on an ongoing basis and to make them aware of their active involvement. At the same time, the environmental team gains an insight into the views of employees and can thus improve the company's environmental performance in symbiosis with them.

#### 5 DEFINITION ENVIRONMENTAL ASPECTS

Environmental aspects are aspects of the "activities, products or services of an organisation" that can have an impact on the environment. A basic distinction is made between direct and indirect environmental aspects.

**Direct environmental aspects** include energy consumption, water consumption, consumption of operating materials (paper), land consumption, waste generation and emissions. They arise as an indirect consequence of activities at the site and can be controlled.

**Indirect environmental aspects** arise indirectly from Gruner's activities, without those responsible having full control over the implementation of the requirements.

It is not always possible to differentiate precisely between direct and indirect environmental aspects. Rather, it is crucial that all significant environmental aspects of the organisation are recorded and evaluated. The assessment of materiality is carried out (annually) by the environmental management officer and the environmental team.



#### 5.1 PROCEDURES FOR THE IDENTIFICATION AND ASSESSMENT OF ENVIRONMENTAL ASPECTS

The environmental aspects are identified and assessed in direct cooperation with the departments. The ABC assessment scheme recommended by the Federal Environment Agency (UBA) is used for the assessment, which is presented below:

Quantitativa	Forecasted future	Hazard potential					
Quantitative significance	development	high (A)	average (B)	low (C)			
	increasing (A)	А	А	В			
high (A)	stagnating (B)	А	В	В			
	decreasing (C)	В	В	В			
	increasing (A)	А	В	В			
average (B)	stagnating (B)	В	С	С			
	decreasing (C)	В	С	С			
	increasing (A)	В	В	В			
low (C)	stagnating (B)	В	С	С			
	decreasing (C)	В	C	С			

#### TABLE 1: ABC EVALUATION SCHEME OF THE UBA1

Following this categorisation of the environmental aspects into categories A, B or C, the environmental aspects are assessed with regard to the potential influence of a location. The following additional categories were defined for this purpose:

I There is also great control potential in the short term,

II The environmental aspect can be managed sustainably, but only in the medium to long term,

III There are no control options for this environmental aspect, only in the very long term or only depending on the decisions of third parties.

An environmental aspect that is rated A and I, for example, is a particularly important environmental aspect of high relevance for action, for which there is also relatively high control potential in the short term.

<sup>&</sup>lt;sup>1</sup> Source: http://www.bmub.bund.de/fileadmin/Daten\_BMU/Pools/Broschueren/umwelterklaerung\_2014\_bf.pdf



#### **5.2** DIRECT ENVIRONMENTAL ASPECTS

In principle, the environmental management officer is responsible for recording the environmental aspects and the core indicators derived from them. The core indicators to be collected are derived from the E- MAS Regulation (Annex IV C) and are collected in the following key areas for a full calendar year:

- Energy efficiency
- Material efficiency
- Water
- Waste
- Biological diversity
- emissions (of greenhouse gases and air emissions)

Gruner's core indicators are reported using the reference value of turnover. The total annual inputs/impacts in the relevant area are stated as follows:

• Energy efficiency:

-Total direct energy consumption with indication of total annual energy c o n s u m p t i o n , expressed in MWh/sales

-Total consumption of renewable energy, including the share of energy from renewable energy sources in total annual consumption

- area of material efficiency:
  - Total annual consumption of the most important materials (aluminium, iron, copper, PE plastic granulate (incl. cleaning granulate), solder, cleaning granulate, blasting agent, biocide for air conditioning and cooling water, copy paper, safety gloves) expressed in t/sales or units/sales. air conditioning and cooling water, copy paper, safety gloves) expressed in tonnes/turnover or units/turnover
- Water sector:

-Total annual water consumption expressed in m<sup>3</sup>/turnover

- Waste sector:
  - "Total annual waste generation", broken down by type of waste and expressed in tonnes/turnover



• Biological diversity:

Space consumption expressed in m<sup>2</sup> built-up area and m<sup>2</sup> built-up area/turnover

Emissions area:

-Total annual greenhouse gas emissions, which include CO2 emissions, expressed in tonnes of CO2 equivalents and tonnes/turnover

-Annual total emissions to air, which include emissions of <sub>SO2</sub>, <sub>NOX</sub> and PM, expressed in tonnes/turnover

The core indicators are also used to monitor the achievement of environmental targets. They also serve as a basis for the development of future measures (see environmental objectives). Selected data and key figures are presented in a comprehensible form to inform employees about the development of environmental protection.

The EMAS Regulation makes it easier to deal with the direct environmental aspects by narrowing down the main environmental aspects of an organisation in Appendix I.

The following diagrams show the relevant direct environmental aspects with the respective environmental impacts. The table also shows the result of the assessment of the individual environmental aspects carried out according to the ABC assessment scheme.



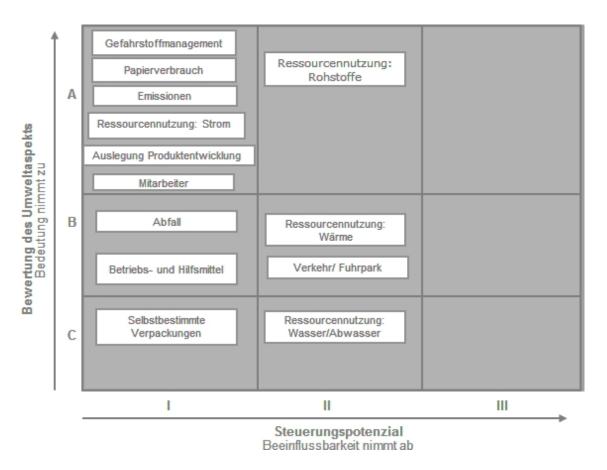


FIGURE 6: DIRECT ENVIRONMENTAL ASPECTS OF GRUNER AG

The handling of hazardous substances is highly relevant. At the Wehingen site, the aim is to successively reduce these and contain the diversity that has developed over the years. In order to achieve this, the substitution test must be continuously implemented and the documentation obligations with regard to CMR substances must be improved. In addition, the new requirements of the GefStV and CLP must be implemented. A similarly relevant aspect is **paper consumption**, which is to be reduced with the help of document management. The aim is to drastically reduce annual consumption and switch to more environmentally friendly alternatives when purchasing. In addition, the emissions caused by the constant **transport** between the plants, which is carried out by service providers, are among the very important and easily controllable environmental aspects. The quantifiable emissions should be determined with the help of the transport companies. Electricity consumption is another important factor that should be reduced directly - controlled by an energy management system.

### Furthermore, the **design of the**

## Environmental Statement 2022



The aspect of conserving resources is also a key factor in the development of our **products**. Actively **involving employees** in our environmental management system is very important to us, so that they carry the system beyond Gruner, for example back home. This is to be achieved primarily through mandatory participation in a survey on environmental areas within the company. **Waste generation** reflects an environmental aspect categorised as medium, as the majority of waste is secondary raw material for downstream companies, which can nevertheless be controlled directly. Another aspect of this category is the volume of **operating and auxiliary materials**, which are also directly influenced, but can be significantly lower in volume than raw materials. Self-determined packaging was assigned marginal relevance, as the majority of the packaging used in our company is reusable packaging determined by the customers. The aspects of **raw material utilisation**, **heat utilisation**, **transport/vehicle fleet and water utilisation are** less relevant. However, the relevance of the environmental impact decreases in the same order, which is why appropriate savings measures should also be considered here if necessary.

#### 5.3 INDIRECT ENVIRONMENTAL ASPECTS

The collection and evaluation of indirect environmental aspects is usually only possible on the basis of qualitative assessments, as these are generally less quantifiable than the direct environmental aspects described above. In order to record all significant indirect environmental aspects, Gruner's processes are analysed and then evaluated using the assessment procedure described in section 5.3. The aspects are listed again in an environmental register with their respective environmental relevance.

The following chart lists the topics and areas of action of Gruner AG that are considered indirect environmental aspects. This chart also shows the assessment of the individual indirect environmental aspects.



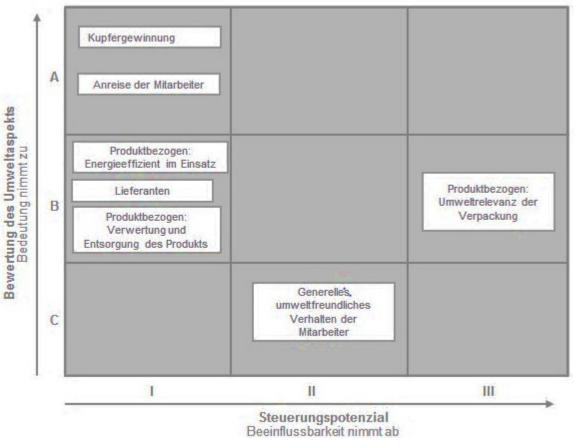


FIGURE 7: INDIRECT ENVIRONMENTAL ASPECTS OF GRUNER AG

Indirect environmental aspects primarily include **copper extraction and production**, over which we can have a direct and significant influence in terms of supplier selection. We also see **our employees' travel to work** as an important issue that should be examined more closely, continuously monitored and made more environmentally friendly. The aspects of **more energy-efficient use of** our products, **suppliers** and subsequent **recycling and disposal options for our products** are of medium relevance. Another indirect environmental aspect is reflected in the **general**, **environmentally friendly behaviour of our employees**, which we can only influence marginally. The **environmental relevance of the packaging prescribed by customers is of** medium relevance due to its reusable properties, albeit in large quantities, and can therefore hardly be controlled by us.



#### **6** ENVIRONMENTAL OBJECTIVES AND MEASURES

Objectives and measures result from all the points mentioned in the previous section, the top-down and the bottom-up method. The following diagram is intended to show the dialogue between objectives and measures:

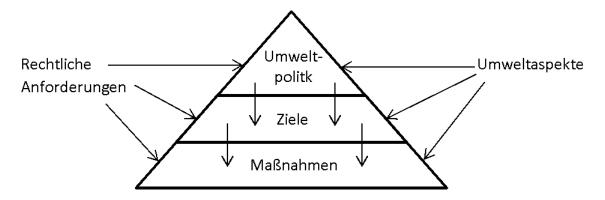


FIGURE 8: TOP-DOWN METHOD FOR DEFINING OBJECTIVES AND MEASURES OF AN ENVIRONMENT

Measures can therefore be developed from operational objectives, which in turn arise from the top down from the strategic objectives of environmental policy in line with legal requirements and environmental aspects. We have defined strategic and operational objectives and measures according to this scheme. This environmental programme will be expanded to include further points resulting from the bottom-up method, which takes the opposite approach to the top-down variant. In this process, measures are added, for example, from employee suggestions and legal obligations and, if necessary, assigned to existing or newly defined strategic and operational goals.



#### 6.1 ENVIRONMENTAL TARGETS 2022

The following table lists the environmental targets for the past year with an assessment.

#### **TABLE 2: OPERATING OBJECTIVES AND MEASURES INCLUDING EVALUATION**

<b>Operational objective</b>	Measured variable(s) or key figure	Start value	Target value	Value at the end of 2022	Eno ugh?
Energy consumption is reduced by 5 %.	Energy consumption [kWh]	2.538.563	2.411.632	2.399.320	Yes
CO2e emissions from our own car fleet will be reduced by 5% by the end of 2023.	g CO2 / km	142,6	135,5	116,0	Yes
No complaints from residents and employees about emissions from the company.	Complaints / year	-	0	0	Yes
The number of hazardous substances in the company as a whole is reduced by 10%.	Number of hazardous substance s	193	174	183	no
The total amount of mixed municipal waste (residual waste) will fall by 10%.	Amount of residual waste [kg]	29.500	26.550	25.880	Yes
Printer paper consumption falls by 10%.	Printer paper sheet / year	800.000	720.000	400.000	Yes
GRISU receives at least 2 environmental proposals per year	Number of proposals / year	4	2	1	no
Biodiversity increases through one compensation measure per year.	Number of measures / year	-	1	1	Yes



#### 6.2 ENVIRONMENTAL TARGETS 2023

Operational objective	Measured variable(s) or key figure	Start value	Target value	Measures to achieve targets
Energy consumption is reduced by 5 %.	Energy consumption [kWh]	2.538.560	2.411.632	LED lighting, energy efficiency systems, awareness
CO2e emissions from our own car fleet will be reduced by 5% by the end of 2023.	g CO2 / km	142,6	135,5	Conversion to hybrid / electric vehicles and improved emission values
No complaints from residents and employees about emissions from the company.	Complaints / year	1	0	Open communication with interested parties
The number of hazardous substances in the company as a whole is reduced by 10%.	Number of hazardous substances	193	174	Standardisation of hazardous substances
The total amount of mixed municipal waste (residual waste) will fall by 10%.	Quantity of residual waste [kg]	29.500	26.550	Optimisation of waste separation, reduction of packaging
Printer paper consumption falls by 10%.	Printer paper sheet / year	400.000	360.000	Reduction printouts, e.g. by digital signature
Biodiversity increases through one equalisation measure per year.	Number of measures / year	1	1	Realisation of internal or external projects



#### 7 DATA ON THE ENVIRONMENTAL PERFORMANCE OF GRUNER AG

Our environmental targets and the environmental measures derived from them are the most important environmental management tool for achieving continuous improvement in our environmental performance. The core indicators, which are calculated on the basis of consumption data set in relation to a reference value, are listed below.

The values for land consumption, operating resources, energy, water, waste and emissions of Gruner AG are compared for the consecutive years 2013 to 2018. This allows the years to be compared with each other and the development of environmental performance to be assessed. The core indicators are presented individually in tables. The reference figure for our core indicators is revenue. In addition, from 2020 onwards, the number of person-days incurred will also be considered as an indicator. As the amount of data available here is still limited, turnover will continue to be considered in parallel as a reference value for the time being.

In line with Official Journal EU L 76/26 of 19 March 2013, we have linked our sales, which serve as a reference value for the core indicators, to the base year as follows:

Reference size	Unit	2017	2018	2019	2020	2021	2022
Turnover	(based on 2013) and expressed in euros.	143	149	174	159	182	179
Number of employees		390	381	402	395	414	403
Person days					57.929	75.084	78.032

The core indicators in bold in the following sections reflect the indicators required by Annex IV Section C2 of the EMAS Regulation. All others are intended to better explain the context to the reader.



#### **7.1** ENERGY EFFICIENCY

Since the beginning of 2018, Gruner AG has been supplied with green electricity with guarantees of origin. This has significantly increased the proportion of renewable energy.

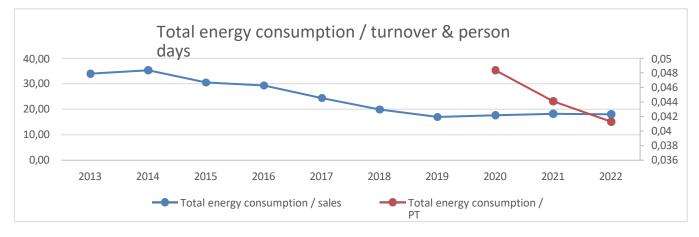
Heating oil consumption increased in 2022 compared to previous years. The reasons for this are that the use of more energy-efficient machines meant that less heat could be recovered and the oil/gas heating was mainly operated with oil to relieve the gas network during the gas shortage.

Due to various construction and relocation measures, some of the gates were open for longer periods of time, and the new building was also temporarily heated with a mobile oil heating system.

## TABLE 4: ENERGY CONSUMPTION DATA

Core indicators	Unit 📩	2017 💌	2018 💌	2019 💌	2020 💌	2021	2022 🔻
Energy efficiency							
Power consumption	MWh	2.983	2.429	2.378	2.362	2.539	2.399
Electricity consumption / turnover	MWh/€	20,82	16,29	13,67	14,90	13,98	13,44
Power consumption / PT	MWh / day	/			0,0408	0,0338	0,0307
Gas consumption	MWh	362,25	400,26	367,21	335,12	521,86	294,50
Heating oil consumption	MWh	-	-	67,56	13,06	144,32	370,03
Heating energy consumption	MWh	362,25	400,26	432,20	348,18	666,18	523,34
Heating energy consumption / turnover	MWh/€	2,53	2,68	2,48	2,20	3,67	2,93
Heating energy consumption / PT	MWh / day	/			0,0060	0,0089	0,0067
Weather-adjusted heating energy consumption	MWh	307,92	380,25	384,66	320,32	552,93	481,47
Weather-adjusted heating energy consumption /							
Turnover	MWh/€	2,15	2,55	2,21	2,02	3,05	2,70
Weather-adjusted heating energy consumption / PT	MWh / day				0,0055	0,0074	0,0062
Diesel	kWh	132.010	131.213	134.609	83.276	98.056	30.425
LPG	kWh	10.116	11.449	9.276	7.589	6.746	15.743
Total fuels	MWh	142,13	142,66	143,89	90,87	104,80	299,65
Total fuels / sales	MWh/€	0,99	0,96	0,83	0,57	0,58	1,68
Total fuels / PT	MWh / day				0,0016	0,0014	0,0038
Consumption of renewable energies	MWh	1.068	2.429	2.378	2.362	2.539	2.399
Consumption of renewable energies / turnover	MWh/€	7,45	16,29	13,67	14,90	13,98	13,44
Consumption of renewable energies / PT	MWh / day	/			0,0408	0,0338	0,0307
Share of RE in total energy consumption	%	0,31	0,82	0,80	0,84	0,77	0,74
Total energy consumption	MWh	3.487	2.972	2.954	2.801	3.310	3.222
Total energy consumption/MA	MWh / pc	8,94	7,80	7,35	7,09	7,99	8,00
Total energy consumption / sales	MWh/€	24,34	19,93	16,98	17,66	18,23	18,05
Total energy consumption / PT	MWh / day	/			0,0483	0,0441	0,0413





## FIGURE 9: TOTAL ENERGY CONSUMPTION / TURNOVER & PERSON DAYS

Compared to 2021, a decrease in energy consumption was recognisable in 2022. This is due to the purchase of new and more energy-efficient machines in the area of injection moulding.

### 7.2 WATER AREA



## **TABLE 5: WATER CONSUMPTION DATA**

## FIGURE 10: WATER CONSUMPTION / TURNOVER



Water consumption fluctuates greatly over the years under review, but a general trend towards reduction can be recognised.

In 2017, an energy-saving evaporative cooling system was installed in the plastic injection moulding plant, the operation of which results in additional water consumption. In addition, more water was required for the new building and the new extinguishing system than in the previous year.

#### 7.3 AREA OF MATERIAL EFFICIENCY

Consumption data in tonnes is recorded for raw materials and supplies for which relevant consumption data is available. The aim is to further expand the database in the coming years. The list of all auxiliary and operating materials comprises over 800 items for one year.

Core indicators	🗸 Unit 🗸	2017 👻	2018	2019	2020 💌	2021	2022 💌
	• Onit						
Copper	t	1.027	1.148	1.145	1.139	1.515	1.392
Copper / turnover	t/€	7,17	7,70	6,58	7,18	8,35	8,35
Copper / PT	t / day				0,0197	0,0202	0,0178
Plastic granulate (incl. cleaning granulate)	t	321,60	455,40	473,00	525,50	351,56	311,14
Plastic granulate/turnover	t/€	2,25	3,05	2,72	3,31	1,94	1,74
Plastic granulate / PT	t / day				0,0091	0,0047	0,0040
Iron	t	450,30	506,20	393,50	447,80	530,61	406,82
Iron / turnover	t/€	3,14	3,39	2,26	2,82	0,21	0,17
Iron / PT	t / day				0,0077	0,0071	0,0052
Copy paper	t	4,87	4,00	3,00	4,00	2,00	2,00
Copy paper / turnover	t/€	0,04	0,03	0,02	0,03	0,00	0,00
Copy paper / PT	t / day				0,000069	0,000027	0,000026
Aluminium	t	-	-	0,53	-	-	-
Aluminium / Turnover	t/€	-	-	0,00	-	-	-
Aluminium / PT	t / day				-	-	-
Solder	t	1,21	0,69	0,78	1,28	0,59	0,08
Solder / Turnover	t/€	0,010500	0,004600	0,004500	0,008000	0,000230	0,000033
Solder / PT	t / day				0,000022	0,00008	0,000001

## TABLE 6: CONSUMPTION DATA FOR RAW MATERIALS, CONSUMABLES AND SUPPLIES



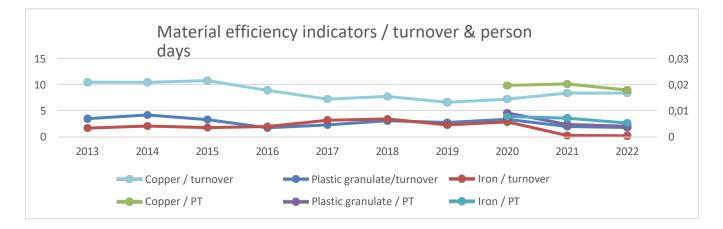


FIGURE 11: MAIN MATERIAL EFFICIENCY INDICATORS (COPPER, IRON, PLASTIC GREY NU- LAT)

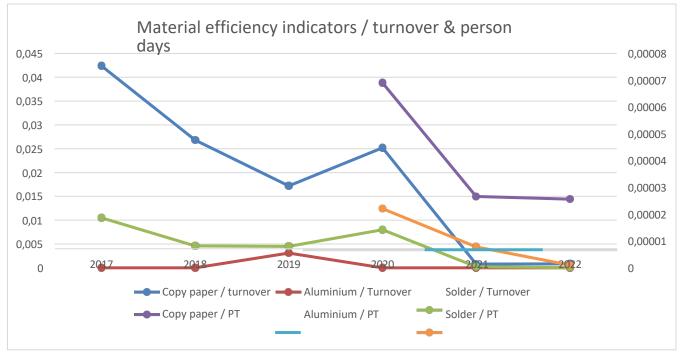


FIGURE 12: FURTHER MATERIAL EFFICIENCY INDICATORS

The company's largest input in terms of volume is copper strip, whose material efficiency indicator remained almost constant until 2015, fell in 2016 and 2017 and rose again moderately in 2018. The material efficiency of copper has remained constant since 2021. Copper strips are a key technical component of our products.



Aluminium has no longer been purchased and processed since 2020 and is therefore no longer included in the evaluation.

Iron is mainly used in the actuator sector.

The core indicators for plastic granulate show a positive trend.

Demand for printing paper as an auxiliary material has fallen as a result of measures such as double-

sided printing and digitalisation.

Solder is indispensable for production in the company and is therefore one of the most important

auxiliary materials. Due to the relocation of some soldering processes and the introduction of pressure

welding, this

indicator, however, over the years under review.

WASTE AREA

TABLE 7: DATA ON WASTE									
	▼	V					V		
Miscellaneous Other / TA Other / TA	t Turnover / \ <b>BL<sub>I</sub>Ę/8;ayD</b>	1,50 € ATA ON N	0,07 0,00 ON-HAZAR	DOUS WAST	E	- - -			
Core indicators Total volume of non-hazardous waste Total volume of non-hazardous waste /Turnover Total volume of non-hazardous waste / employee Total volume of non-hazardous waste / PT	Unit ↓ t / € t / MA t / day	2017 <b>2</b> 0 196,83 1,37 0,50	18 20: 177,53 1,19 0,47	2020 179,06 1,03 0,45	2021 165,75 1,05 0,42 0,0029	20. 145,92 0,80 0,35 0,0019	22 • • • • • • • • • • • • • • • • • •		

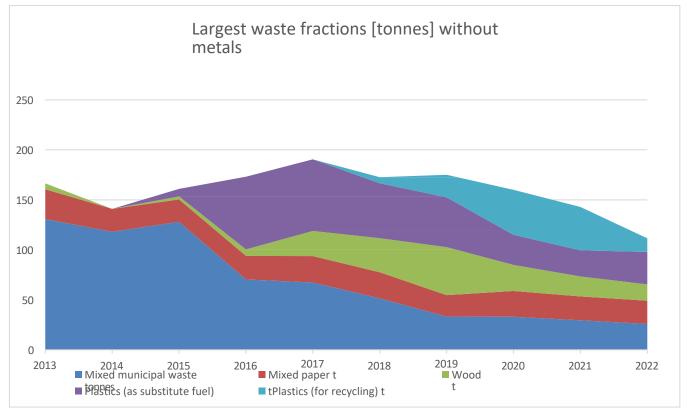
Gruner AG Bürglestr. 15-17 - D-78564 Wehingen

## Environmental Statement 2022









#### FIGURE 14: QUANTITIES OF NON-HAZARDOUS WASTE



As our metal waste is a valuable secondary raw material, it is not listed here.

Plastics have been collected separately in the production areas since the end of 2015 and utilised as a substitute fuel. Since 2018, some plastic waste has also been collected by type and sold for recycling. Since 2021, some plastic waste has been processed and reused by the company itself, resulting in a lower proportion of plastic waste for recycling.

The mixed municipal waste fraction consists of household-type waste from all areas of our company. The associated core indicator has decreased significantly over the years.

Over the years, there has been a decreasing and therefore positive trend, particularly in the proportion of mixed municipal waste.

The core indicators for hazardous waste are listed in the table below.

There were fluctuations in hazardous waste over the years under review. The fluctuations are due to the fact that the relocation of various production areas to our foreign plants resulted in disposal and cleaning activities. The increase in hazardous waste in 2022 is due to clean-up and conversion activities.

Core indicators	<b>Unit</b> 2017	▼ 2018	2019	▼ 2020	2021	202	22 💌
Total volume of hazardous waste	t	9,61	2,51	5,91	5,45	4,00	8,61
Total volume of hazardous waste /							
Turnover	t/€	0,07	0,02	0,03	0,03	0,02	0,05
Total volume of hazardous waste/ MA	t / MA	0,02	0,01	0,01	0,01	0,01	0,02
Total volume of hazardous waste / PT	t / day				0,000094	0,000053	0,0 00110

#### **TABLE 9: DATA ON HAZARDOUS WASTE**

info@gruner.de



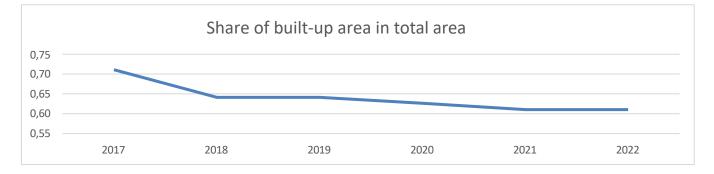


### FIGURE 15: HAZARDOUS WASTE WASTE / TURNOVER

#### 7.5 BIODIVERSITY

Core indicators	👻 Unit 💌	2017 💌	2018 💌	2019 💌	2020 💌	2021 💌	2022 📑
Total area	m²	22.271	25.974	25.974	26.985	28.183	28.183
Built-up area	m²	15.833	16.653	16.653	16.903	17.202	17.202
Share of built-up area in total area	%	0,71	0,64	0,64	0,63	0,61	0,61
Built-up area/turnover	m² / €	110,52	111,67	95,71	106,62	94,75	94,75
Built-up area/ PT	m² / day				0,2918	0,2291	0,2204
Share of built-up area in total area / turnover	m² / €	0,50	0,43	0,37	0,40	0,34	0,34
Share of built-up area in total area / MA	m² / MA	0,28	0,29	0,24	0,27	0,23	0,23
Additional sealed area	m²	6.377	7.092	7.092	7.283	7.283	7.283
Proportion of built-up and sealed area in							
Total area	%	99,73	91,42	91,42	89,63	86,88	86,88

## **TABLE 10: BIODIVERSITY DATA**



#### FIGURE 16: PROPORTION OF BUILT-UP AREA

In order to measure the impact on biodiversity, sealing is used as a central indicator. For this purpose, both the total built-up area and the proportion of the built-up area in relation to the total area of the property are considered.



In order to create construction opportunities for further planned growth, plots of land with existing buildings in the neighbourhood were acquired in 2018.

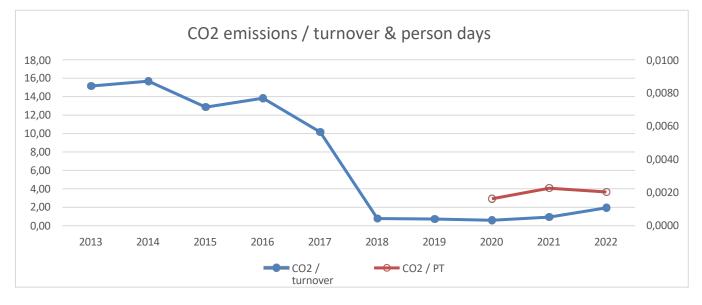
One neighbouring developed property was also added in 2020. As a result, the proportion of developed land fell to 62.6% compared to 64.1% in the previous year.

#### 7.6 **EMISSIONS AREA**

The emissions were calculated using the GEMIS database based on the recorded consumption of heating oil, gas, diesel, LPG, refrigerants and electricity and are listed in the table below.







## FIGURE 17: CO2 EMISSIONS / TURNOVER



In 2018, an electricity tariff was selected in which 100% of the electricity is generated emission-free from renewable energies. This enabled emissions to be significantly reduced.

In 2021, emissions were slightly higher than in the previous year, which is also due to the renewed increase in heating and driving requirements following the coronavirus-related restrictions in 2020.

In 2022, a 90% reduction in CO2 emissions was achieved at the site compared to the start year 2013.

#### 8 LEGAL BACKGROUND

Gruner undertakes to comply with all environmental requirements as a minimum standard. The relevant environmental regulations in connection with EMAS for the site implementing EMAS have been identified and are listed in a legal register. The legal register can be accessed and is kept up to date by the UMB.

Compliance with environmental regulations is checked as part of internal audits.

The online tool on the umwelt- online.de website constantly ensures that legal regulations are kept up to date. We also maintain an internal list of responsibilities for the areas affected for the respective intersections of the laws with the activities in our company.



#### 9 CONTACT PERSON

Do you have any further questions, suggestions or criticism regarding our environmental statement?

### Please address your concerns to our environmental management officer:

Mr Christian Hagen e-mail: <u>christian.hagen@gruner.de</u>

# You can request further copies of this environmental statement at the following address or download it from our homepage:

Gruner AG Bürglestr. 15-17 D-78564 Wehingen Germany

Phone: +49 (7426) 948-0 Fax: +49 (7426) 948-200 E-mail: info@gruner.de Internet: <u>www.gruner.de</u>



#### **10** DECLARATION OF VALIDITY

The undersigned Dr. Norbert Hiller, EMAS environmental verifier with registration number DE-V- 0021, accredited or licensed for the scope 27.12 (NACE code), confirms that he has verified whether the site(s) or the entire organisation, as stated in the environmental statement of the organisation Gruner AG with registration number DE-169-00083, meets all the requirements of Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 and Amendment Regulation 2017/1505 of 28.08.2017 and 2018/2026 of 19.12.2018 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

By signing this declaration, you confirm that

- the assessment and validation were carried out in full compliance with the requirements of Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 and amending Regulation 2017/1505 of 28 August 2017 and 2018/2026 of 19 December 2018,
- the result of the assessment and validation confirms that there is no evidence of noncompliance with the applicable environmental regulations,
- the data and information in the organisation's/site's environmental statement provide a reliable, credible and true picture of all the organisation's/site's activities within the scope specified in the environmental statement.

This declaration cannot be equated with an EMAS registration. EMAS registration can only be carried out by a competent body in accordance with Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 and amending Regulation 2017/1505 of 28 August 2017 and 2018/2026 of 19 December 2018. This declaration may not be used as a stand-alone basis for informing the public.

Date

Signature