



# GBG Srl SUSTAINABILITY PROJECT #1

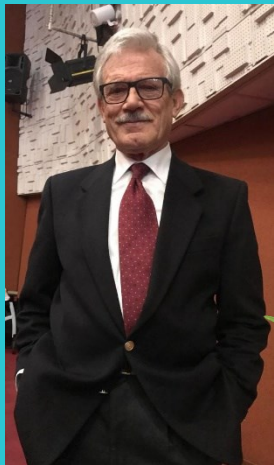
## REPORT APRIL 2023

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Renzo Grandi  
President



Ciriaco Brogna  
Vice President



# Message from the Board

## SDGs engagement

We are writing to reaffirm our commitment to enhancing our engagement in the sustainability project. As you know, our company has been actively engaged in environmental protection for many years, with significant investments made in 2014-2016 and ongoing efforts to this day. We have also taken social and government action to support our sustainability goals.

We are committed to upholding the principles of sustainable development and contributing to the achievement of the United Nations' Sustainable Development Goals (SDGs).

In particular, we aim to make progress towards SDGs 8, 9, and 13, which respectively focus on decent work and economic growth, industry innovation and infrastructure, and climate action.

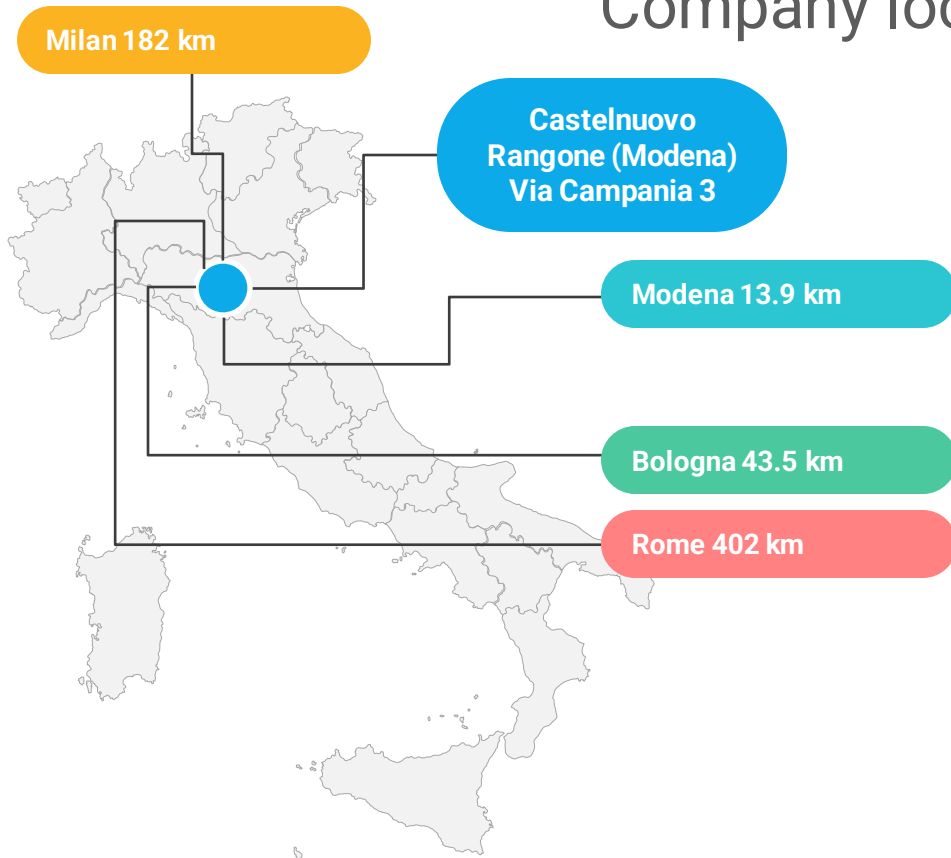
We will continue to pursue sustainable practices in all aspects of our business operations and look forward to making further progress in the years ahead.

The Board



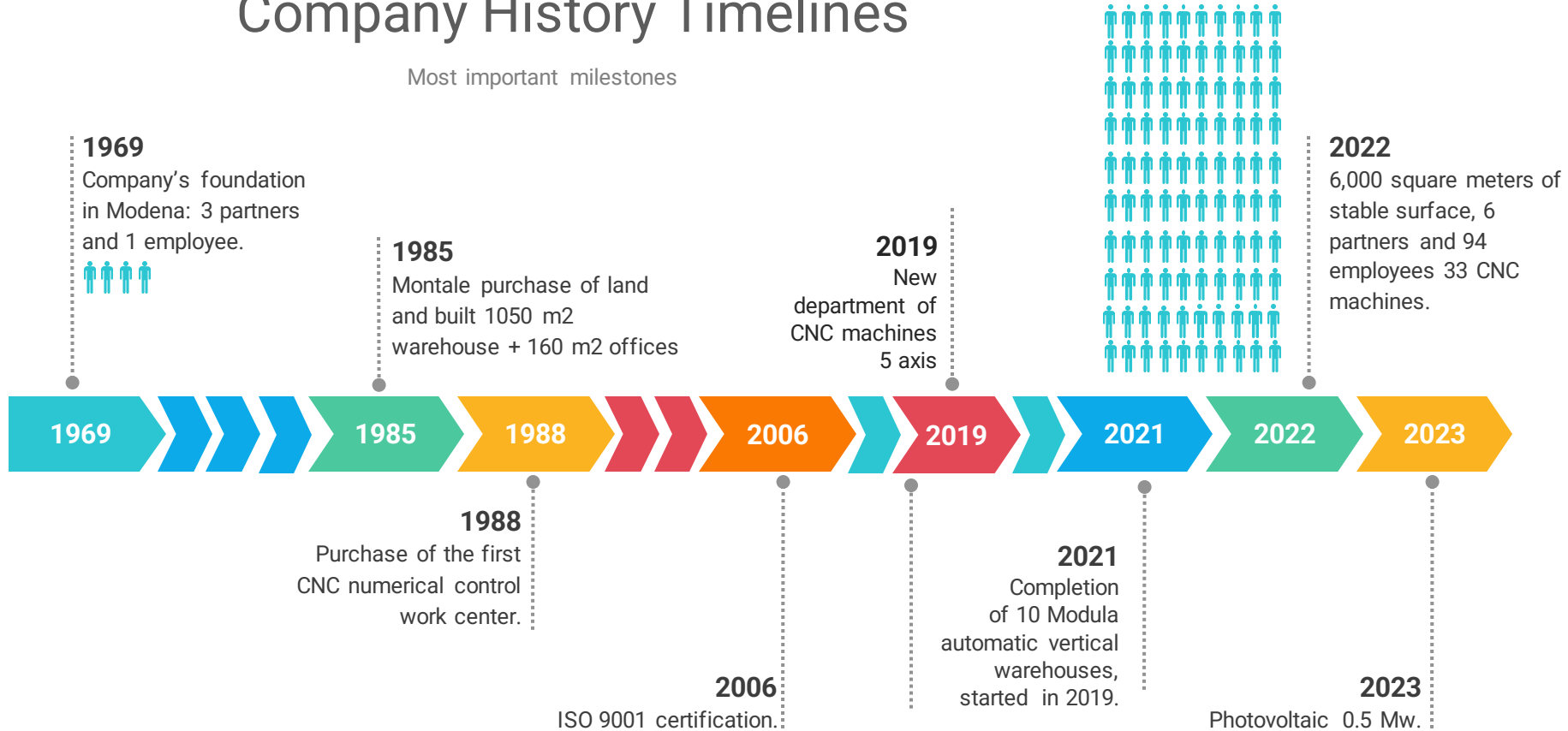
INDUSTRIA MECCANICA

# Company location



# Company History Timelines

Most important milestones



# Company Financial Information

Amounts in EUR/000

FY 2022 Actual

**TURNOVER 28,747**

**NET PROFIT 1,883**

**COST OF PERSONNEL 5,500**

**STAFF 98**

FY 2021 Actual

**TURNOVER 29,490**

**NET PROFIT 3,053**

**COST OF PERSONNEL 5,346**

**STAFF 100**

# Workforce

Table A - by organizational units, gender and age group | Table B – Permanent and temporary by gender

Table A	All Genders	Male	Female	<20	20-35	36-60	60+
Top management	6	6	-	-	-	4	2
Second level management	16	14	2	-	4	11	-
Other white collars	11	8	3	-	5	6	-
Blue Collars	66	66	-	-	30	35	1
Total	99	94	5	-	39	56	3

Table B	All Genders	Male	Female
Permanent	87	82	5
Temporary	12	12	-

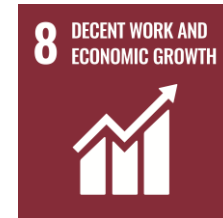


# Workforce

Table C - by nationality| Table D – Turnover

Table C	All Nationality	Italy	Morocco	Philippines	Switzerland	Guinea
Top management	6	6	-	-	-	-
Second level management	16	14	1	-	1	-
Other white collars	11	11	-	-	-	-
Blue Collars	66	54	5	4	1	2
Total	99	85	6	4	2	2

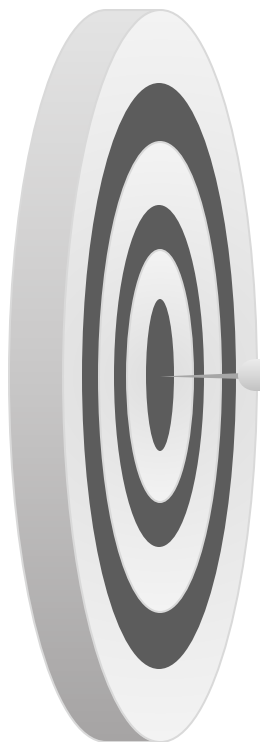
Table D	2020	2021	2022
Total Workforce - In	5	15	2
Total Workforce - (Out)	(2)	(10)	(6)



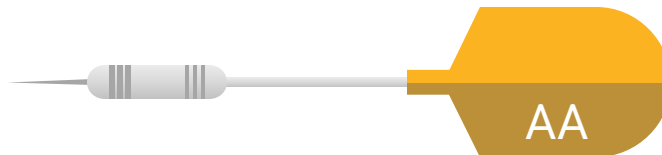


# Main Targets - AAA

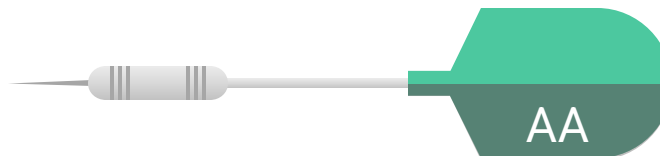
Ambitions → Actions → Achievements



**Circularity**  
Satisfactory level of circularity from the processing sludge.



**Workers wellbeing**  
Suction hoods and *ad personam* earplugs for noise reduction.  
Constant temperature during the full year



**Environment protection**  
Photovoltaic plant  
CDP Questionnaire 2023  
Carbon Footprint inventory.

# Main targets

Description



AAA

## Circularity

Over the years GBG has achieved a satisfactory level of circularity above all regarding production. From the processing sludge, collected in special tanks, the following is extracted:

- a) water that is put back into the production cycle after a purification process;
- b) metal scraps that are sold to companies that process them to be used again as raw materials;
- c) used oils that by current legislation, are entrusted to specialized companies for disposal in respect of the environment.



AA

## Workers wellbeing

Suction hoods have been installed in the production areas to prevent workers from inhaling the mists caused by the use of emulsifiable oils. For noise attenuation, in addition to the standard disposable earplugs, customized earplugs are also supplied based on the conformation of the worker's auricle, which can be used for a long time.

The next target to be achieved is .....



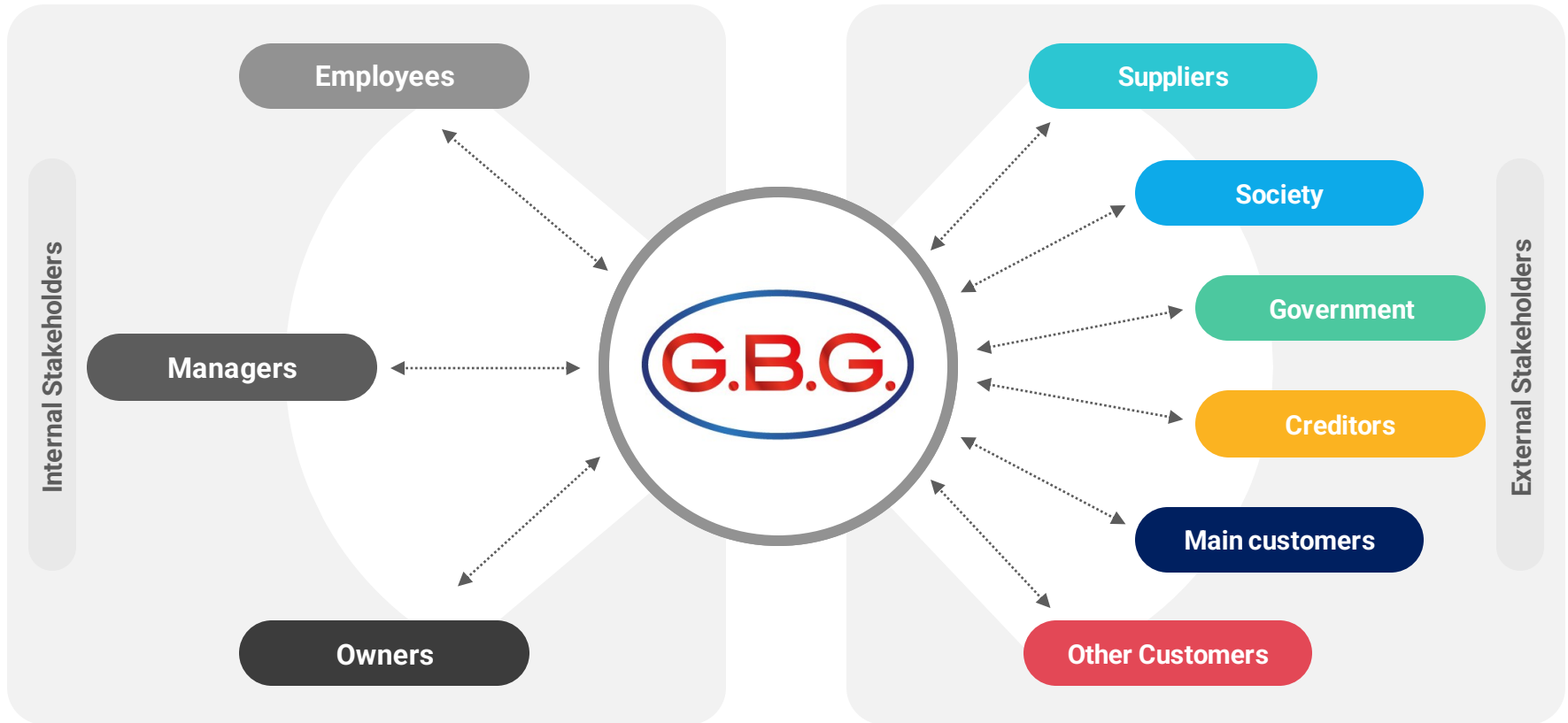
AA

## Environment protection

For the sake of the planet for long time, we did relevant investments to have clean air and for the purification and reuse of the water employed in the production process.

The next month of May we planned to respond to the CDP (Carbon Disclosure Project) Questionnaire 2023 also by measuring our Carbon Footprint. In the meantime, a photovoltaic plant will be fully active.

# GBG Stakeholders





**GBG Srl**

**The Road to Sustainability**

# Road to Sustainability – main steps

Part 1 of 3

2014

- New building extension designed with LED lighting.
- Automatic intake system for building at civic n. 4
- Reuse of the heat produced by the compressors
- Roof replacement with insulating panels
- Reduction of the number of physical servers
- Replacing the heating system building at civic n. 3
- PLC modification of the Machines Centers
- Adaptation of the beams of the sheds with anti-seismic supports that prevent the building from falling in the event of an earthquake

2016

- Roof renovation and insulation for building at civic n. 4
- Pavement for the building at civic n. 1

2022

- Test for the search for micropollutants dispersed in the air by oil mists
- Construction of a photovoltaic system on the roofs of buildings



The Past from  
2012

- Extension of the automatic intake system to all machines and buildings
- Replacing the traditional compressor with an inverter compressor
- Modification of the air heating system
- Laser marker purchase
- Replacement of the lighting system of the warehouse with LED lights

2015



2021

- Risk assessment of the work-related stress
- Emergency plan - Revised.



## The Present 2023

### Photovoltaic plant

The photovoltaic system was completed in the first few months of the year, with a connection to the company's electricity grid. The full activation is expected at the beginning of May, after testing.



# Road to Sustainability

Part 2 of 3

### CDP – Carbon Footprint

The collection of information and data necessary to carry out the Carbon Footprint inventory has begun and, together with the answers to the CDP 2023 Questionnaire, should be completed by the end of May.



### ESG Assessment

During the month of April, with the support of external consultants, we followed up on a project aimed at understanding the company's current positioning concerning sustainability issues.



### Website

GBG planned to realize its website where will be possible to communicate, for the purpose of greater transparency towards all stakeholders, in addition to the basic information of the company, also the most important aspects of the sustainability process already started many years ago.

### Materiality Matrix

By the end of 2023, we have assumed the completion of the GBG materiality matrix through Stakeholders Engagement. We consider this a fundamental step in our journey to improve the level of ESG compliance of our company.



# Road to Sustainability

Part 3 of 3

The Future  
2024-2026

## Further innovation

To be always a step ahead the Company planned to continue the process of innovation that characterized until now its activity



## Paperless Office

Our aim is to complete by 2025 the full elimination of paper used in th different departments, started in 2022.

## Robotization

By the end of the three-year period 2024-2025 GBG is thinking about a greater implementation of the level of robotization of the company.







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The Sustainable Projects



# Environmental projects 2014

Part 1 of 2



## **New building extension designed with LED lighting.**

The 360 square meters of extension of the building has allowed the company layout to be optimized and the machines fleet to be expanded. Thanks to the replacement of the old lamps with LED ones, an energy saving of 40% has been foreseen.

## **Automatic intake system for building at civic n. 4**

The automatic intake system installed uses pneumatic valves and management of the inverter suction motors. This intervention resulted in the reduction and optimization of the volume of air drawn in and taken outside (less air to be heated/cooled) and lower electricity consumption (35%)

## **Reuse of the heat produced by the compressors**

A ducting system has been installed for reusing the heat produced by the compressors for internal heating in winter

## **Reduction of the number of physical servers**

The number of physical servers has been reduced from 6 to 2, thanks to a virtual environment with a reduction of energy consumption and an increase in the degree of fail-over safety

# Environmental projects 2014

Part 2 of 2



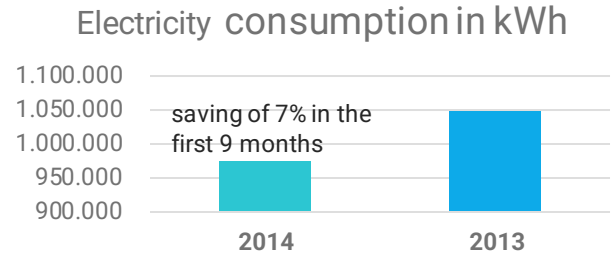
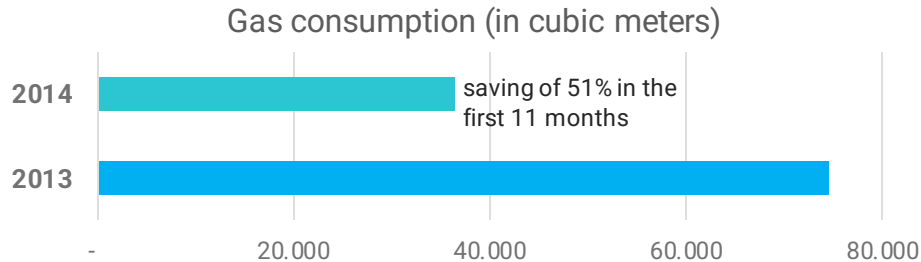
## Replacing the heating system building at civic n. 3

The old heating system of the building at civic number 3 has been replaced with a high-performance condensing boiler. This system allows heating the rooms using water at a temperature lower of approximately 30° with an automatic compensation system based on the outside temperature (the expected saving is approximately 20% compared to the old system in terms of gas consumption)

## PLC modification of the Machines Centers

The PLC modification of the Machining Centers allows the recognition of the working hours with the automatic shutdown during in the work break if the machine is stopped

The following graphs show the savings of consumption due to the projects described above



# Environmental projects 2015



## **Extension of the automatic intake system to all machines and buildings**

The automatic intake system has been extended to all machine equipment in all warehouses with pneumatic valves and inverter suction motor management. The implementation of this project is aimed at reducing and optimizing the volume of air drawn in and taken outside (less air to be heated/cooled) and lower electricity consumption (35% saving)

## **Replacing the traditional compressor with an inverter compressor**

The traditional compressor has been replaced with an inverter one in order to optimize electricity consumption based on the compressed air used.

## **Modification of the air heating system**

The aerothermal heating system has been modified to be able to use it with water temperatures 30° lower

## **Laser marker purchase**

In order to achieve savings in consumption related to transport to the external supplier used until September 2015 for the marking of products, a laser marker was purchased with which to carry out the work within the company.

## **Replacement of the lighting system of the warehouse with LED lights**

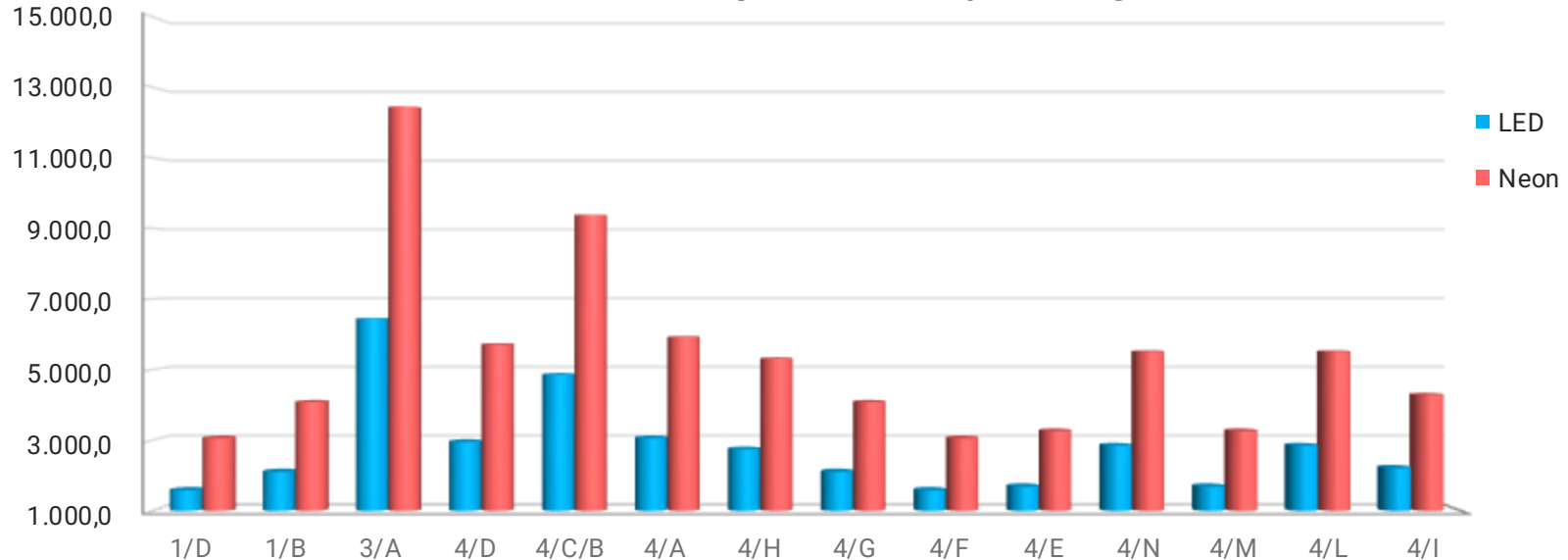
The lighting system of the shed in Via Campania 3 was upgraded with LED lights to achieve greater energy savings.

# Environmental projects 2014-2015

Analysis of annual consumption LED lights vs Neon – Part 1 of 2

Following the completion of the project to replace the neon lamps with LED lamps for all the buildings, it was possible to analyze the total annual consumption and calculate the relative savings.

## Annual consumption in kWh by building

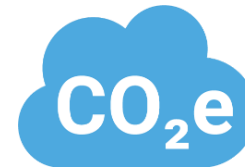


# Environmental projects 2014-2015

Analysis of annual consumption LED lights vs Neon – Part 2 of 2

Consumption and Cost	LED	Neon
kWh	38,755	74,927
EUR	15,115	29,221

Savings	LED
kWh	36,172
EUR	14,107
%	48.3



11 t<sup>(\*)</sup>  
annually avoided

(\*) Calculation source: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

# Environmental projects 2016 and 2018



Roof renovation and insulation for building at civic n. 4 - 2016



The roof before and after

Pavement for the building at civic n. 1 2016

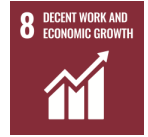


The pavement -before and after

Doors insulation at civic n. 3 - 2018



# Social projects 2021



## Risk assessment of the work-related stress

Based on a specific Italian labor law, the company must assess the risk of stress of its employees, related to work activity. The required activity consists of the development and application, within one's own organization, of a method for identifying the dangers that can determine the risk and for detecting and measuring the level of stress. The evaluation method adopted is that proposed by the ISPESL guidelines, based on the proposal of the National Network for the Prevention of Psychosocial Distress in the Workplace.

### The checklists used for risk assessment consider the following aspects:

- |                                       |  |
|---------------------------------------|--|
| ▪ work environment and equipment      | ▪ role within the organization           |
| ▪ task planning                       | ▪ career evolution                       |
| ▪ load and pace of work               | ▪ decision-making autonomy, work control |
| ▪ working hours                       | ▪ interpersonal relationships at work    |
| ▪ function and organizational culture | ▪ home-work interface                    |

The evaluation process carried out led to the evidence of a low level risk within GBG.

### The following other indicators were taken in to account:

- |                                     |  |
|-------------------------------------|--|
| 1. accident indices                 | 5. percentage of internal transfers requested by staff |
| 2. sick leave                       | 6. staff turnover rate                                 |
| 3. percentage of absences from work | 7. proceedings, disciplinary sanctions                 |
| 4. percentage of holidays not taken | 8. requests for extraordinary medical examinations     |

Also in this case the level of risk attributed was found to be low.

# Social projects 2021

Part 2 of 2



## Emergency plan - Revised

In the first months of 2021, revision number 2 of the Emergency Plan was made in compliance with the provisions of the law on company safety. The Plan is made up of 6 chapters:

1. Purpose and contingency scenarios
2. Description of the activity
3. Plant-structural characteristics for emergency management
4. Management features
5. Emergency management dynamics
6. Responsibility and updating

### Main conceivable emergency scenarios within the company

- |  |              |
|--|--------------|
| ▪ fires of various origins and nature                                | ▪ gas leaks  |
| ▪ accidents or illness of one or more people present on the premises | ▪ floods     |
|  | ▪ earthquake |

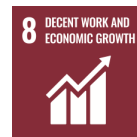
### Types of emergency considered

<b>LEVEL 1</b>	Events that can be controlled by the person directly involved such as electrical overheating, spillage of small quantities of dangerous substances, machine malfunction, etc.
<b>LEVEL 2</b>	Events that can be controlled by the company's internal emergency team, such as : the beginning of a fire that requires the use of fire-fighting devices, a minor injury or illness, an electrical blackout, minor flooding, etc.
<b>LEVEL 3</b>	Events that can be partially controlled by the company's internal emergency team and subsequently by external rescue organisations, such as a fire in the process of spreading, a spill of large quantities of dangerous substances, a serious injury or illness, a whirlwind, an earthquake, etc.



# Social and Environmental projects 2022

Part 1 of 2



## Test for the search of micropollutants dispersed in the air by oil mists

In March 2022, the company carried out periodic checks of dust and other airborne micro-pollutants present in the production premises during the normal routine work activities of machine tool operators and tumbling workers.

The polluting agent consists of oil mists, deriving from the use of emulsifiable oils on the machines and whose impact on personnel is reduced by the presence of extractor hoods.

All the measurements, made by the Ecoricerche laboratory ([www.ecoricerche.net](http://www.ecoricerche.net)) in compliance with the UNI EN ISO 9001:2008 standard, have shown concentrations of pollutants abundantly below the acceptable limits.



Consulenza

# Social and Environmental projects 2022

Part 2 of 2



## Construction of a photovoltaic system on the roofs of buildings

In 2022, the project to cover the roofs of various buildings with photovoltaic panels was started. The works were completed at the end of February 2023 and, from the following month of March 2023, the company began to use the energy produced by the plant.

### SYSTEM LANDSCAPE



1065 Photovoltaic modules



5 Inverters



533 Optimizers

### SIMULATION RESULTS



Installed DC power

426.00 kWp



Maximum AC power obtained

365.31 kW



Annual Energy Production

472.62 MWh



CO2 emissions avoided

120.99 t



Equivalent trees planted

5,557



(source: **solar edge** | REPORT DESIGNER | **Boni Renato e Figli srl** )



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**The SDGs Level of Compliance**

# The SDGs “Wedding Cake”

Credit: Azote for Stockholm Resilience Centre, Stockholm University  
CC BY-ND 3.0.

The level of compliance of GBG with the 16 UN SDGs are presented according to the three level of the cake, starting from the base level; the Resilient Centre of the Stockholm University, in fact, decided in this representation to focus the Biosphere as the most important part of the sustainability.

The SDG 17 has not been considered due to its prevailing destination, to the national and international public institutions.



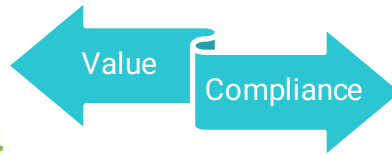
# Methodology used to assess the level of compliance

## Questionnaire ESG-70

We have adopted a questionnaire consisting of 70 questions that have been specifically structured for SMEs. The questionnaire is divided into three ESG pillars: 25 questions on the Environment, 30 on Social issues, and 15 on Governance.

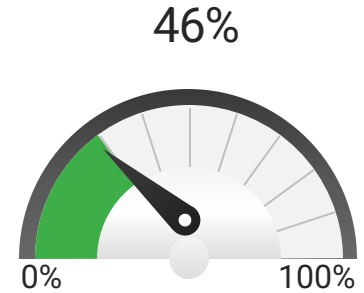
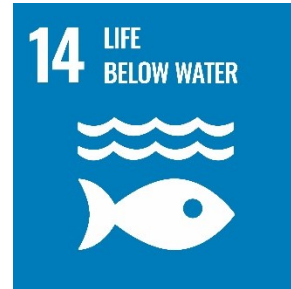
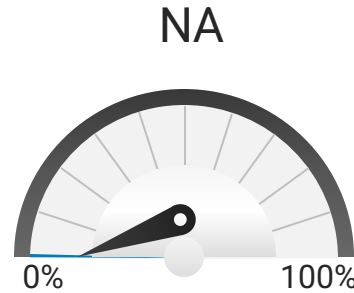
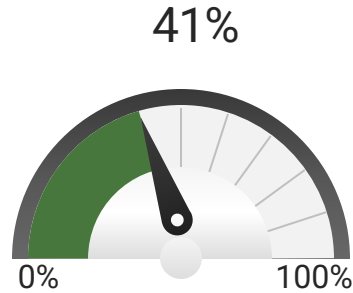
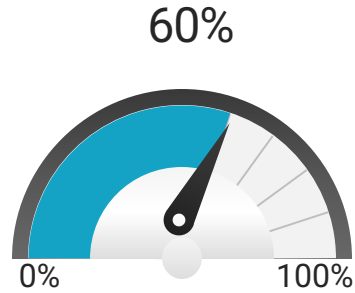
To ensure the reliability of the data collected, where applicable, we collected the supporting documents and filed them with the related answers. By using this methodology, we aimed to provide an assessment, as accurate as possible, of the company's compliance with the SDGs, taking into account the unique circumstances and challenges faced by SMEs.

The percentage of compliance was measured based on the sum of the evaluations given to each answer, compared to the maximum value obtainable for all the answers. Where the same SDG applies to more ESG pillars, a weighted average is calculated based on the importance of the SDG itself in each of the pillars considered.



# SDGs level of compliance

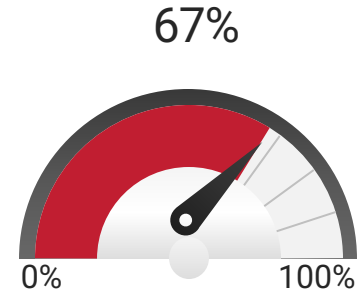
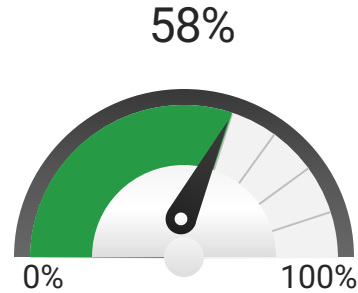
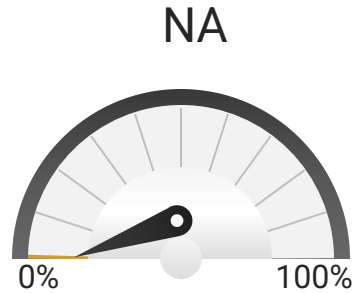
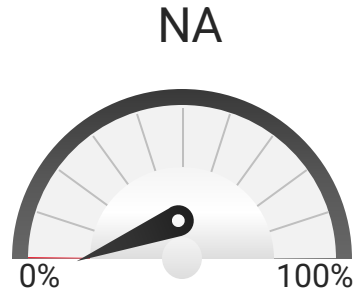
## BIOSPHERE





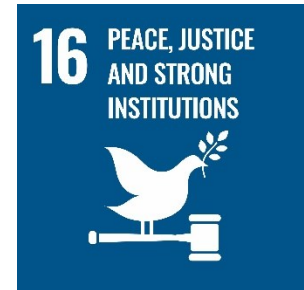
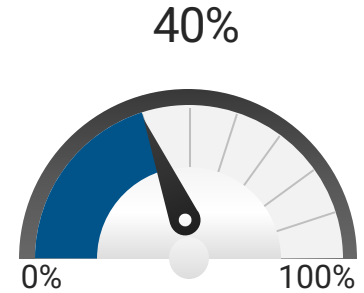
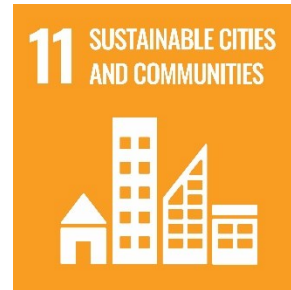
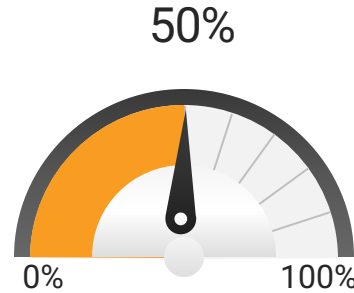
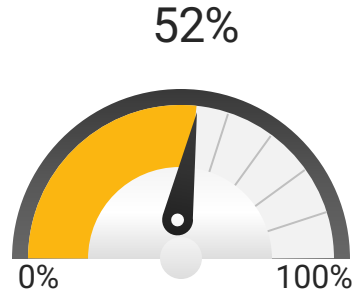
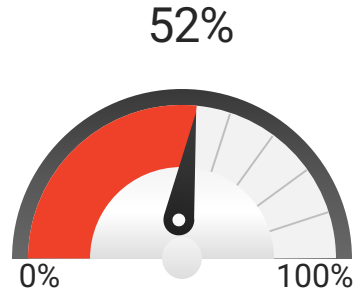
# SDGs level of compliance

## SOCIETY (part 1 of 2)



# SDGs level of compliance

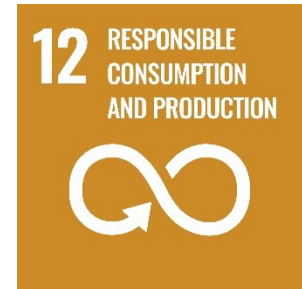
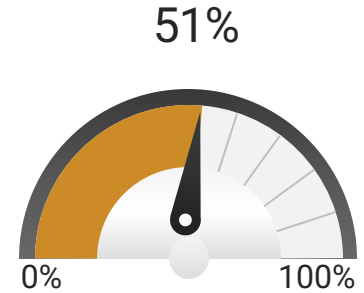
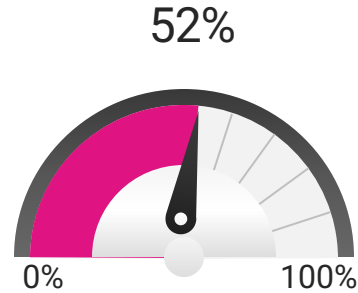
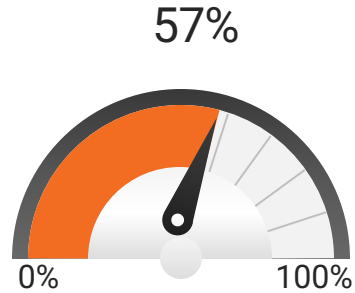
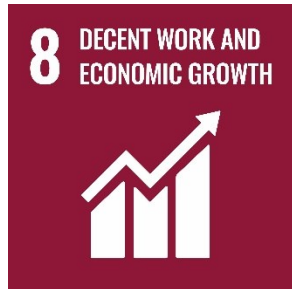
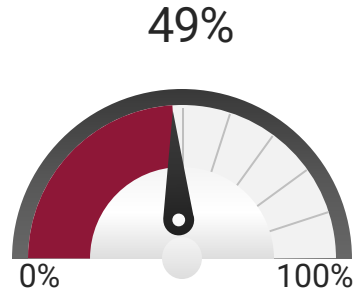
## SOCIETY (part 2 of 2)





# SDGs level of compliance

## ECONOMY





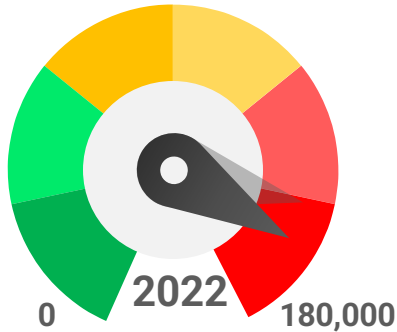
**GBG srl**

**Manufacturing hours and  
Consumptions - GHG emissions**

# Manufacturing hours - Workers

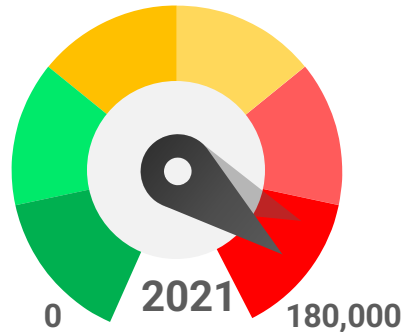
Last 3 years

162.8 Kh



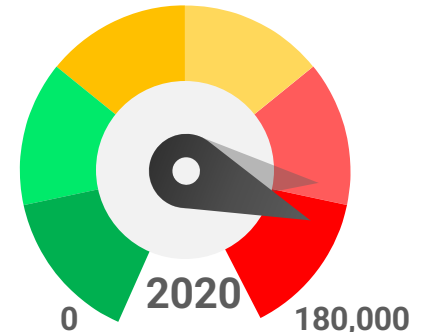
Variance vs prior year	
h	-2,812.50
%	-1.73

165.6 Kh



Variance vs prior year	
h	+9,591.50
%	+5.79

156.1 Kh

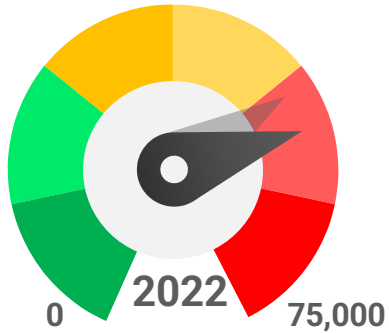


Variance vs prior year	
h	NA
%	NA

# Manufacturing hours - Machines

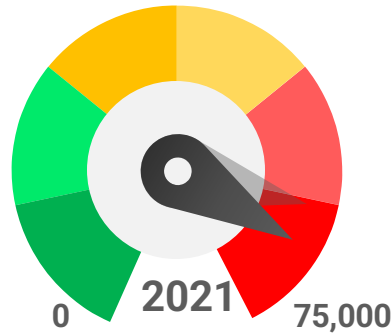
Last 3 years (excluding horizontal machines)

55.8 Kh



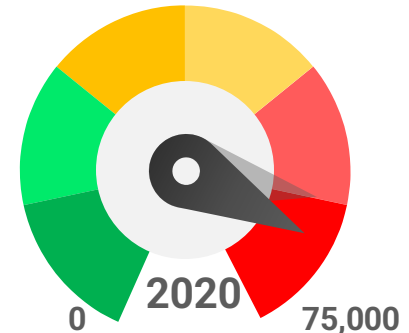
Variance vs prior year	
h	-10,403
%	-15.72

66.2 K



Variance vs prior year	
h	+59
%	+0.09

66.1 Kh

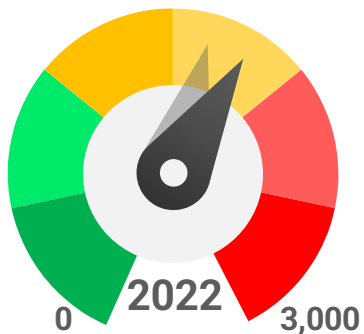


variance vs prior year	
m <sup>3</sup>	+199
%	+10.3

# Water consumption

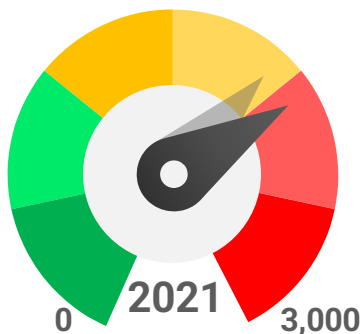
Last 3 years

1,789 m<sup>3</sup>



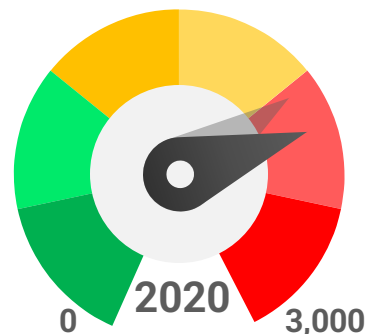
Saving vs prior year	
m <sup>3</sup>	-227
%	-11.3

2,016m<sup>3</sup>



Saving vs prior year	
m <sup>3</sup>	-111
%	-5.2

2,127 m<sup>3</sup>

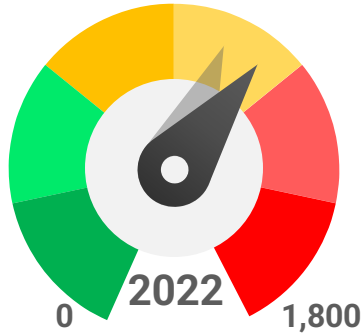


Saving vs prior year	
m <sup>3</sup>	NA
%	NA

# Energy consumption

Last 3 years

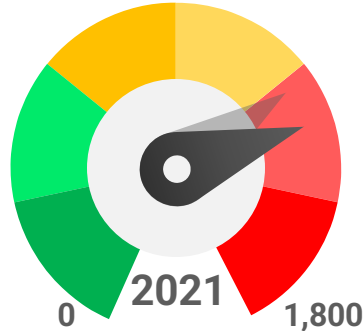
1,156 MWh



zero



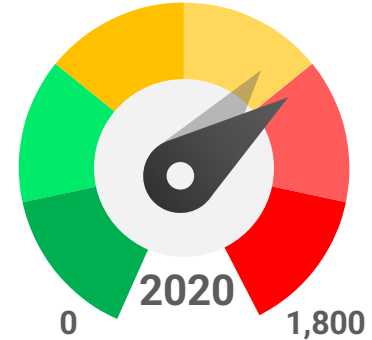
1,304 MWh



292.5 t



1,202 MWh



346.8 t

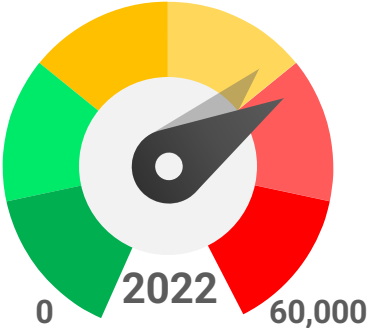


Starting for 1<sup>st</sup> October 100% of energy from renewable sources

# Gas consumption

Last 3 years

41,012 m<sup>3</sup>



77.4 t



54,361 m<sup>3</sup>



102.6 t



40,314 m<sup>3</sup>



76.0 t



# Notes to conversion factors from CO<sub>2</sub> to CO<sub>2</sub> equivalent

## Energy consumption

The conversion factor for electricity varies depending on the source of the electricity and the GWP used. The following are approximate values for some common sources and GWPs:

- Coal-fired electricity: 1 kWh = 1.04 to 1.16 kg CO<sub>2</sub> equivalent (depending on GWP used)
- Natural gas-fired electricity: 1 kWh = 0.35 to 0.54 kg CO<sub>2</sub> equivalent (depending on GWP used)
- Nuclear electricity: 1 kWh = 0.01 kg CO<sub>2</sub> equivalent (regardless of GWP used)
- Renewable electricity (e.g. wind, solar): 1 kWh = 0 kg CO<sub>2</sub> equivalent (regardless of GWP used)

According to the source certification of GBG's provider of electricity, from 2022 until the end of April 2023 100% of energy used comes from renewable sources, that's why the result of CO<sub>2</sub> equivalent is equal to zero.

For the years 2021 and 2020 the above stated have been applied according to the provider's split in percentage of the different sources (estimate 2021, actual 2020), using the average GWP; for the not classified sources the Coal-fired value has been adopted.

The new photovoltaic plant is expected to start in May 2023; after the connection on April 21, 2023, meter and testing are still missing. When the new system will be fully operating only a part of the needed electricity will be obtained at zero CO<sub>2</sub>e emissions; the remaining part, supplied by the usual energy provider, could probably no longer be certified as coming from renewable sources at 100%.








## Gas

### Methane

For the industrial production GBG uses the methane gas; we used for this the most diffused conversion GWP factor: 1 kg of methane = 28 kg CO<sub>2</sub> equivalent (over a 100-year time horizon). The GHG Stationary\_combustion\_tool\_(Version4-1) has been used for the conversion.



# Company's vehicles

	EURO	Fuel	CO <sub>2</sub> grams per km
	4	Gasoline	311
	6B	Gas oil	158
	6B	Hybrid	127
	6B	Gas oil	185
	6B	Gas oil	119
	4	Gas oil	300
	6B	Gas oil	248



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**THANK YOU  
FOR THE  
ATTENTION**