



FULL-SERVICE PROVIDER  
FOR TECHNICAL BUILDINGS

WE KEEP THE >>>  
WORLD RUNNING

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# INTRODUCTION OF GRITEC

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TAILOR-MADE PRODUCTS.  
THOUGHT-OUT IN EVERY DETAIL.  
OPTIMIZED FOR FAST ASSEMBLY.



## PRODUCTS AND SERVICES TAILOR-MADE TO EVERY PROJECT

### EXPERIENCE

We are a leading European manufacturer of technical buildings for public and industrial infrastructure.

We develop and manufacture prefabricated reinforced concrete buildings, fit them with modular components made in our own metal production facility and install technologies in them depending on their use.

Our product portfolio includes both small compact transformer stations and large walk-in industrial buildings comprising many cells. Our products come with comprehensive services, starting with the preparation of project documentation, continuing with the supply and assembly of the building and ending with maintenance and renovation during its use.

### FUTURE-ORIENTED PRODUCTS

By establishing the e<sup>4</sup>you company, GRITEC has focused on the future trend of electric mobility. We are preparing for the introduction of intelligent infrastructure for charging electric buses and other means of public transport.

### INDIVIDUAL SOLUTIONS

We have developed special compact stainless steel stations for international use, which comply not just with the specific requirements of the market but also with the individual requirements of customers.

### EXPERTISE

In our work, we use technologies and procedures from many disciplines, thus creating a comprehensive set of services that we provide to our customers.





## COMPANY ORGANISATION

 **GRITEC GROUP**



 **GRITEC**

Stations, Services, Elements



**E4YOU**

Infrastructure for electric bus charging

# WE KEEP THE WORLD RUNNING

GRITEC DEVELOPS SAFE, RELIABLE AND SYSTEM SOLUTIONS AND ENABLES YOU TO QUICKLY CONNECT THEM TO YOUR TECHNICAL INFRASTRUCTURE IN COMPLIANCE WITH STANDARDS.







↑ Wareneingang 1

Schlosserei

Metallbau

# MORE THAN 60 YEARS OF EXPERIENCE WITH PREFABRICATED CONCRETE

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## FROM SIMPLE STRUCTURES TO LARGE TAILOR-MADE BUILDINGS

Our products meet the strictest requirements for the safety and quality of technical buildings. They are based on more than 60 years of practical experience and offer many benefits to our customers.







## BENEFITS AT A GLANCE

### TAILOR-MADE PRODUCTS

In our production plants, we make technical buildings on more than 50 standard layouts. We offer a wide range of solutions to satisfy our customers. Both the technical buildings and their technological equipment are always based on our clients' specific requirements.

### JOINTLESS DESIGN

Each cell is made as one cast by the process of jointless casting. This manufacturing method gives the structure exceptional mechanical strength, tightness and a long lifetime.

### ECONOMY

- + The high quality of craftsmanship guarantees a long lifetime.
- + Many configuration options thanks to the modular system of our products.
- + Time savings thanks to our specialized consultancy and industrial know-how.

### COMPLIANCE WITH STANDARDS AND REGULATIONS

All of our technical buildings and their components (doors, lock and ventilation systems or overpressure reduction units) meet the requirements of applicable standards.



The jointless design of the reinforced concrete structures ensures a long lifetime and reliability.



# SUSTAINABILITY

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## SUSTAINABLE ACTION THROUGH RESPONSIBILITY



The future is green

As a company, we are actively committed to responsible, sustainable and social action. We therefore act in accordance with ESG criteria in order to make a contribution to society and future generations.

### **E for ENVIRONMENTAL**

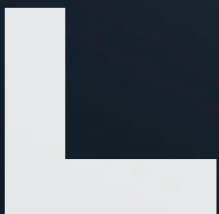
Environmental protection is important to us. We have set ourselves the goal of being climate-neutral by 2040 and are considering all 3 scopes company-wide.

### **S for SOCIAL**

Our employees are the heart of our company. We want to create healthy and fair working environments and supplier relationships.

### **G for GOVERNANCE**

For us, sustainable corporate governance means acting in accordance with ethical principles and legal requirements at all times.







The first substation made of carbon concrete.



OUR VISION IS A  
GREEN, MAXIMUM  
CO<sub>2</sub>-REDUCED  
STATION.



# COMPANY COMMITMENT

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## OUR WORD IS AS SOLID AS CONCRETE

### **SPEED**

We optimize construction and assembly procedures to get you connected as soon as possible.

### **PRECISION**

Time is our most precious asset and we take the same approach to the agreed deadlines.

### **FLEXIBILITY**

With us, you always have more options to choose from. Moreover, you can consult a specialist.

### **QUALITY**

We build for the future and have over 60 years of experience.








COOPERATION  
IS THE BASIS OF SUCCESS.

WE USE ALL OF OUR SKILLS  
TO CONNECT YOU  
TO THE NETWORK.







# CONCRETE AS A CONSTRUCTION MATERIAL

## HARD AND RELIABLE FOR CENTURIES

We manufacture our room cells using reinforced concrete in accordance with the standards EN 206: Concrete – Specification, properties, manufacturing and conformity. At the same time, we comply with the requirements for water penetration through concrete in partially or completely embedded structures. The manufacturing process in our concrete plants is subject to both external and internal quality control. Our prefabricated concrete retains all of its advantages. Therefore, we can also manufacture watertight concrete structures with lower structural thickness. This leads to savings on both your and our side.

In comparison with the recommendation of the WU\* directive, we use a higher quality concrete with a compressive strength of C35/45 and a substantially lower water-cement ratio. Thanks to jointless technology, we are able to reduce humidity transport with lower structural thicknesses and without the use of additional water insulation.

The watertightness of a structure is designed depending on the construction conditions (terrain, precipitation, accumulated and underground water or a possible flood risk) and your additional requirements. Our technicians provide consultancy in a way that is accessible to both specialists and ordinary clients as well as lay users. Using the examples of many reference structures, we will show you a solution for your construction, such as a transformer station, water tower or wastewater treatment plant. We will apply our experience from previous projects to your specific requirements.

\* DafStb Directive: "Waterproof Concrete Structures".  
German Committee for Structural Concrete, e.V., Berlin



## AREA OF APPLICATION

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WE PROVIDE TAILOR-MADE SOLUTIONS  
TO YOUR REQUIREMENTS





## AREAS OF APPLICATION

OF OUR PRODUCTS IN VARIOUS INDUSTRIES



### ELECTRIC TECHNOLOGY

- Walk-in transformer stations
- Compact transformer stations with external service
- Transformer stations embedded in a slope
- Underground transformer stations
- Switching stations
- Diesel aggregates and cogeneration stations
- Compliance with the EN 62271-202 standard



### GAS INDUSTRY

- Pressure regulation stations
- Large measuring stations
- Compressor gas stations
- Gas filling stations – combined buildings
- Soundproofing for concrete room cells min. 47 dB
- Fire resistance EI90, up to EI120 on request



### WATER MANAGEMENT

- Water tanks
- Wastewater treatment plants
- Retention tanks
- Filling stations
- Water measurement shafts
- Well and shaft entrance necks
- Service buildings
- Water treatment stations
- Pressure boosting facilities



### SPECIAL AND HIGH-CAPACITY BUILDINGS

- Multi-storey buildings
- Room cells can be extended to all sides
- Modular principle
- Turnkey design
- Variable execution
- Planning and consultancy
- Creation of project documentation
- Structural stability calculations



### COMMUNICATION AND DATA TECHNOLOGY

- Protection against burglary
- Fire resistance class EI90, up to EI120 on request
- Ventilation and air conditioning
- Technologies on customer request
- Project documentation
- Soundproofing min. 47 dB
- Facade on customer request



### RAILWAY TECHNOLOGY BUILDINGS

- Transformer stations
- Telecommunications
- Relay houses
- Protection against burglary
- Fire resistance class EI90, up to EI120 on request
- Ventilation and air conditioning on customer request
- Project documentation
- Facade on customer request

# OVERVIEW OF PRODUCTS

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FOR VARIOUS USES



## COUNT ON OUR TOP-CLASS SERVICE

We will deliver a compact or walk-in transformer station built according to proven standards or tailor-made to your requirements. There is a concrete solution to each project.



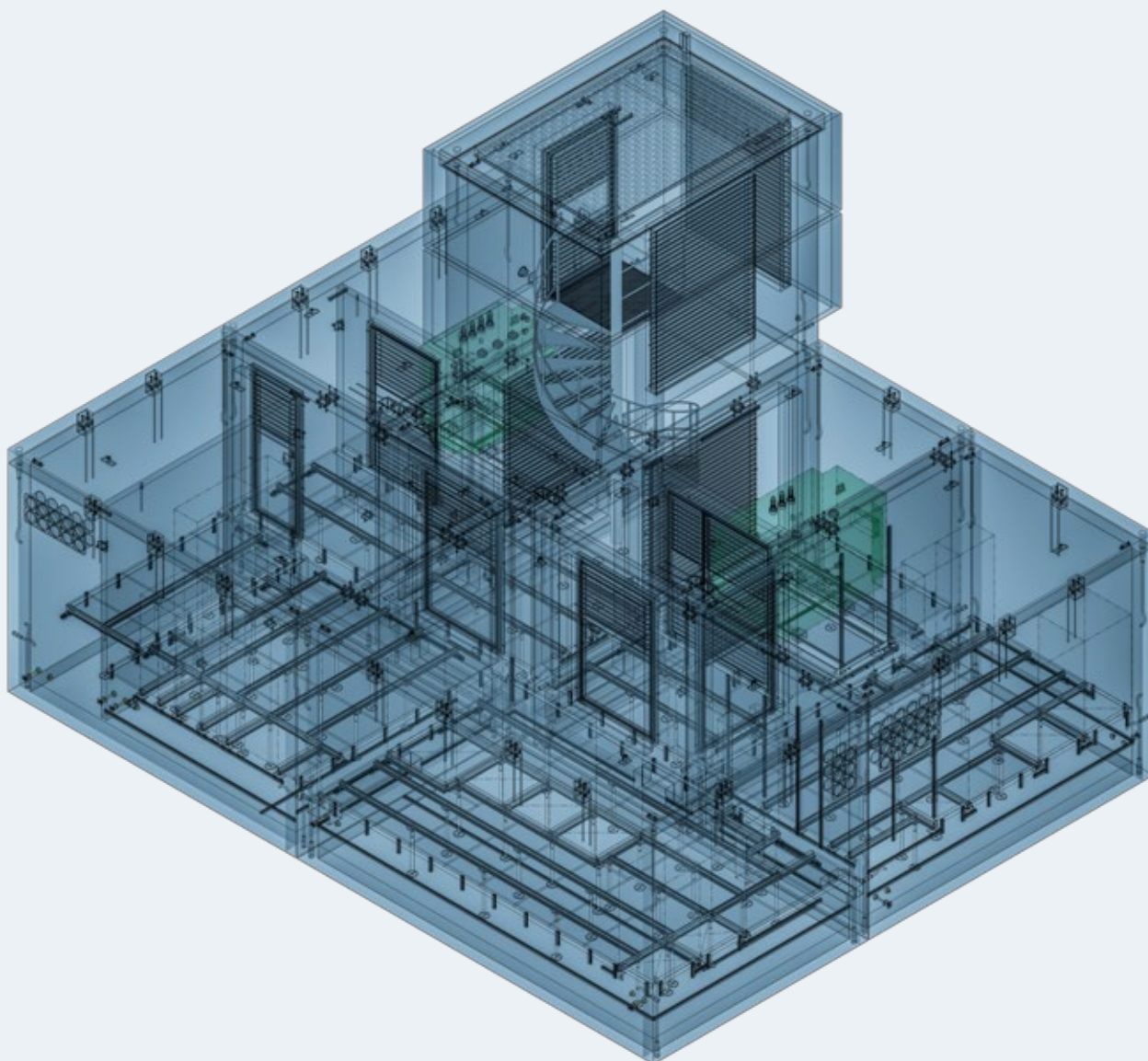




# WALK-IN STATION

## EXAMPLES FROM OUR PORTFOLIO

### UNDERGROUND TRANSFORMER STATION

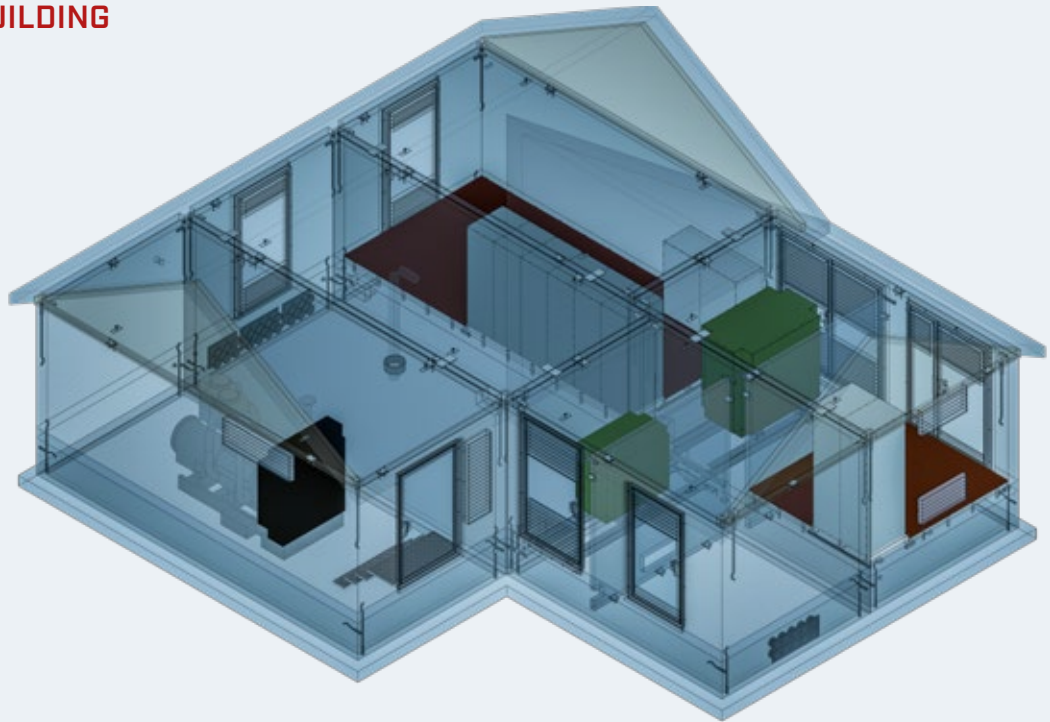


TAILOR-MADE PRODUCTS.  
THOUGHT OUT IN EVERY DETAIL  
OPTIMIZED FOR FAST ASSEMBLY

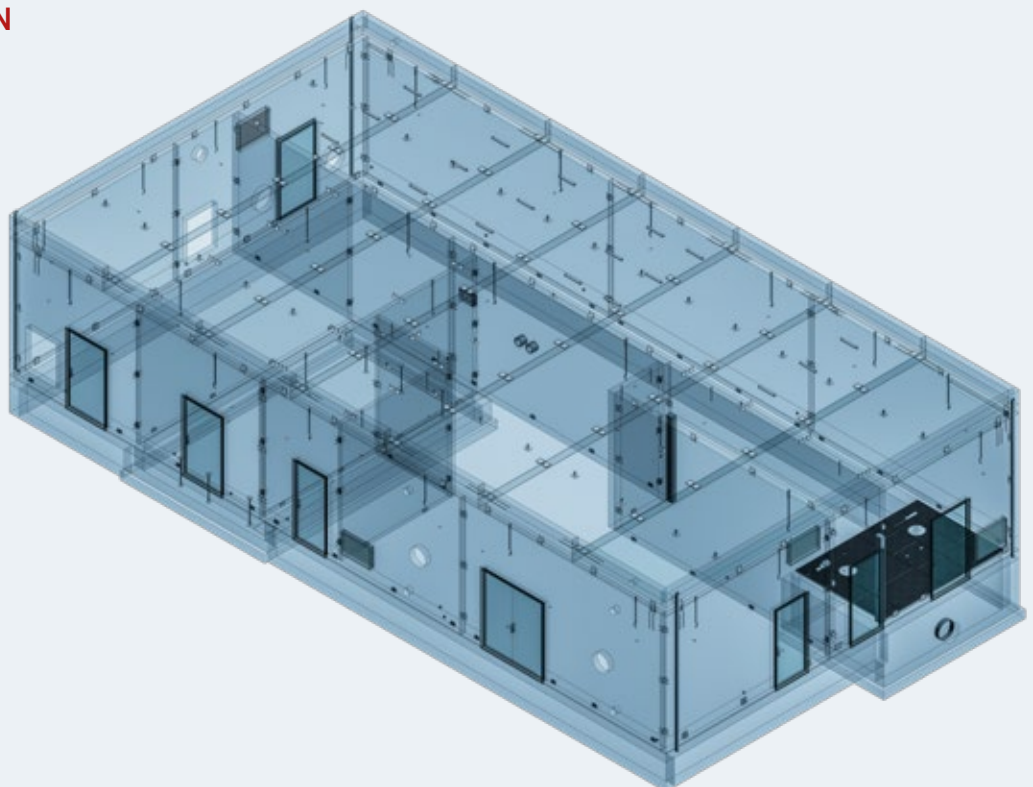
# WALK-IN STATION

## EXAMPLES FROM OUR PORTFOLIO

### COMBINED BUILDING



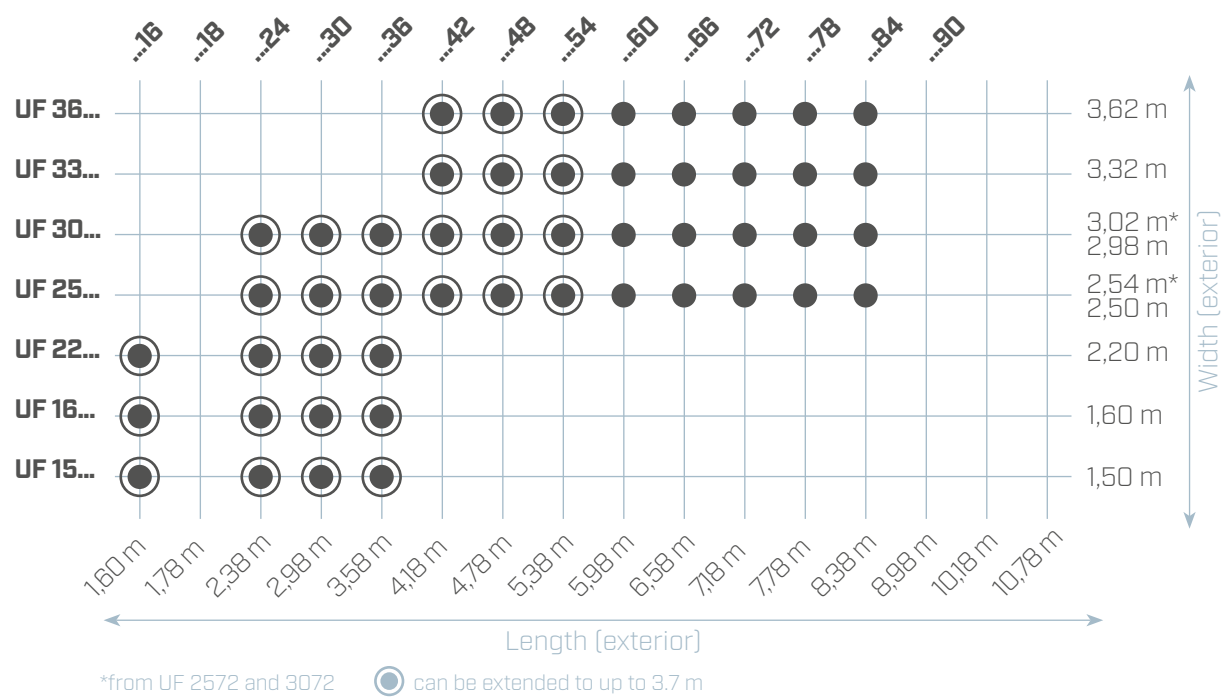
### PANEL STATION





# WALK-IN STATION

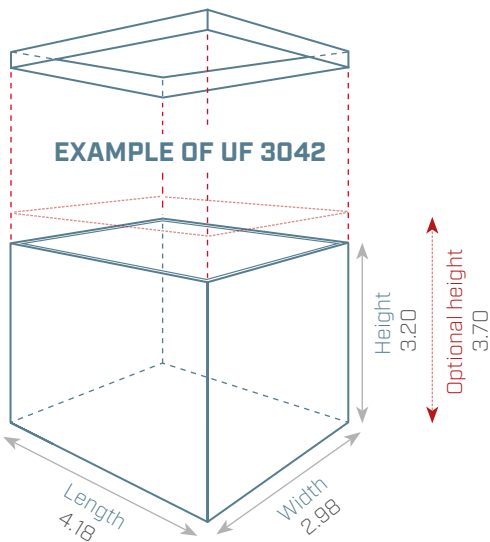
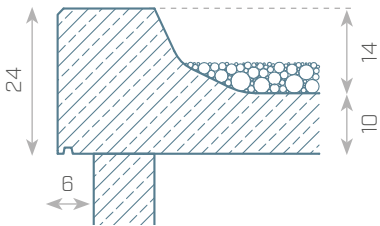
Overview of standard room cells



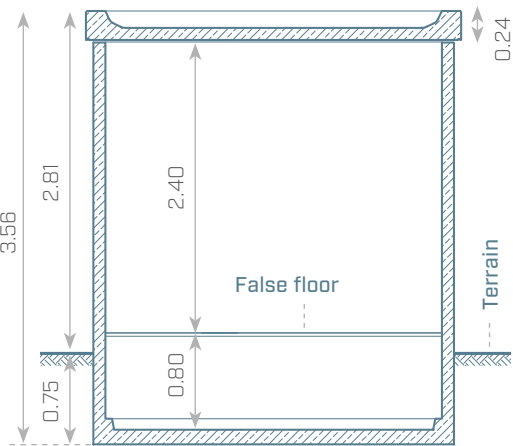
## DIMENSIONS OF STATION

The table above shows the different sizes of construction cells and their combination options. Other dimensions available on request.

## EXAMPLE OF THE “DV” ROOF



## EXAMPLE CROSS-SECTION OF A STANDARD UF STATION



# COMPACT STATION

## EXAMPLES FROM OUR PORTFOLIO

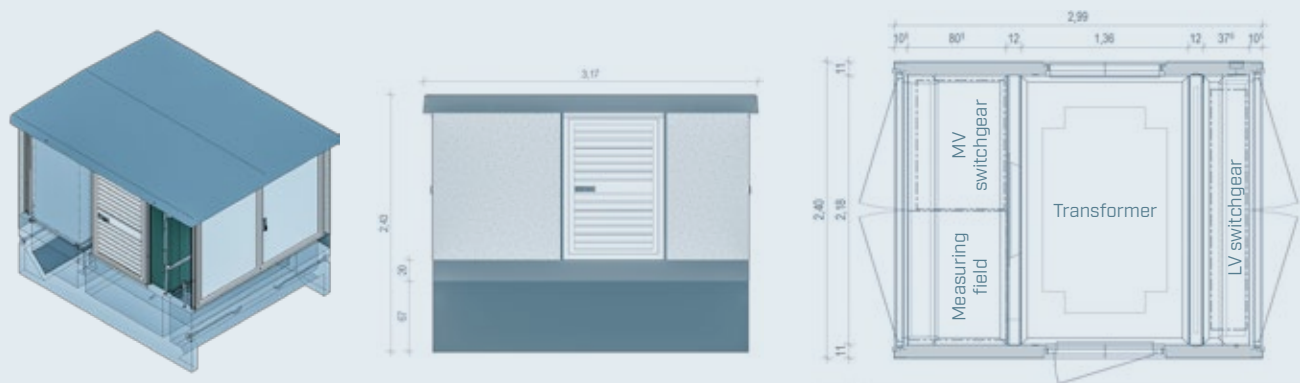
### THREE-CHAMBER VARIANT



Example of UK 1100

STATION TYPE	DIMENSIONS [L × W × H]
UK 1100	3,00 × 1,30 × 2,37 m
UK 1250-34	3,44 × 1,45 × 2,22 m

### THREE-CHAMBER VARIANT



Example of UK 2200-29H

STATION TYPE	DIMENSIONS [L × W × H]
UK 1700-28	2,32 × 1,90 × 2,38 m
UK 2000-28	2,82 × 2,20 × 2,40 m
UK 2200-29H	2,99 × 2,40 × 2,56 m
UK 2600-35	3,55 × 2,80 × 2,58 m

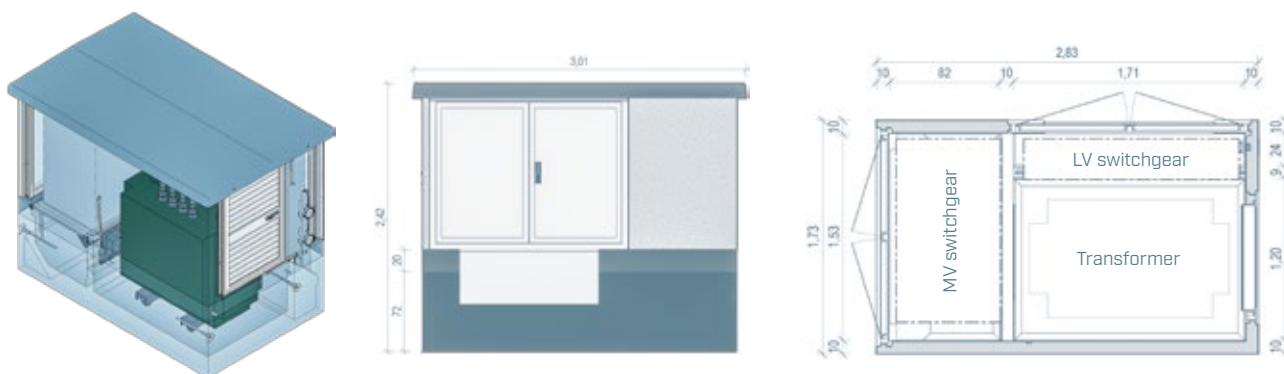




# COMPACT STATION

## EXAMPLES FROM OUR PORTFOLIO

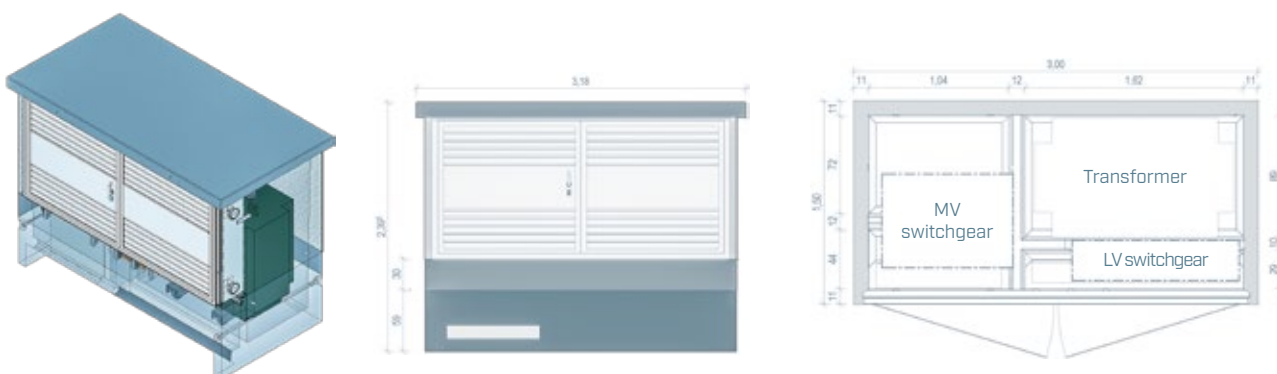
### SERVICEABLE FROM THREE SIDES



Example of UKL 2817

STATION TYPE	DIMENSIONS [L × W × H]
UKL 2817	2,83 × 1,73 × 2,41 m
UK 3119	3,12 × 1,90 × 2,38 m

### SERVICEABLE FROM ONE SIDE



Example of UK 3015

STATION TYPE	DIMENSIONS [L × W × H]
UK 3015	3,00 × 1,50 × 2,39 m
UK 2820	2,80 × 2,00 × 2,69m
UK1700-23	2,32 × 1,90 × 2,38 m

# CONSTRUCTION PART OF THE STATION

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## CONSTRUCTION WORKS ON THE TRANSFORMER STATION

Construction is about team cooperation. During finishing works, you can rely on our team of plasterers, concreters, locksmiths and carpenters – experienced skilled workers with a sense for detail.



- + Interior paint: light grey or according to your wishes
- + Exterior plaster in various designs and according to your wishes
- + Floor systems
  - a flexible system made of aluminium profiles, adjustable zinc-coated steel supports and plywood with flame retardant surface and a key-operated anti-lift latch
  - non-flammable concrete subfloor (reaction to fire class A)
- + System of cable grommets cast-in already in the production plant; suitable for various applications





OUR ROBUST PATENTED  
CABLE GROMMETS  
ENABLE THE PASSAGE  
OF ALL STANDARDIZED  
CABLES USED IN THE  
ENERGY INDUSTRY.



# ELECTRICAL INSTALLATIONS IN THE STATION

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## INTERIOR EQUIPMENT OF THE STATION



Our work energizes us. We electrify your technical buildings and install all the necessary equipment.

- + ELECTRO TECHNOLOGIES
  - Medium and low-voltage switchgears
  - Transformers
  - Protection and control cabinets
  - Measurement boxes
  - Back-up power supply
  - Complete cabling
  - Earthing
- + ELECTRO INSTALLATIONS
  - Installation and construction of switchboards
  - Lighting, sockets
  - Mechanical ventilation, air conditioning, heating
  - Cable trays
  - Earthing, equipotential bonding
  - Exterior and interior lighting protection
  - Electric fire alarm system
  - Burglar alarm system
  - Installation of racks or cabinet switchboards
  - Connection of control circuits
- + ACCESSORIES
  - Fire extinguishing equipment
  - Emergency lighting
  - Signage (tables, diagrams)
  - Writing counter
  - Locking systems
  - Remote control





OUR TECHNICIANS  
WILL PROVIDE  
COMPLETE  
ELECTRICAL  
EQUIPMENT  
ACCORDING  
TO YOUR  
REQUIREMENTS.



# WHEN METAL MEETS CONCRETE

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## OWN-PRODUCED DOORS AND VENTILATION COMPONENTS

Naturally, your building has to be accessible. Perhaps even from several sides. Whether single wing, double-wing, standard or bespoke doors are required, we always focus on detail because we believe that a sense for detail opens the door to success. That is why we make all metal components, such as doors or ventilation components, ourselves.



- + Ventilation components and doors made of aluminium, a very strong and durable material, with anodised surface
- + Doors and ventilation components with heat and sound insulation available on request
- + Innovative entrance systems (card and fingerprint readers, electrical code locks)
- + Supply and assembly of all commercially available doors and ventilation components (steel, stainless steel, PVC)





COLOUR SURFACES  
ON REQUEST:  
COLOURANODISED,  
VARNISHED  
OR POWDER- COATED  
WITH A RAL TONE  
OF YOUR CHOICE.



All doors and ventilation components are made to order in our own metal production facility.

## DESIGN

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### OPTIMIZED FOR THE EYES



The appearance and integration of a technical building in the surrounding landscape can be achieved exactly according to your wishes.

This is especially important in:

- landscape character protection
- urban planning
- integration in green zones or leisure activity areas
- integration in residential areas and underground garages
- or in installations near roads in city neighbourhoods.

That's why we have many types of different materials and surface treatment technologies for you to choose from.

- + Stations embedded in a slope
- + Underground stations
- + Pitched roofs with tiles or metal sheets, flat roofs with decorative gravel, green roofs
- + Decorative facades with face bricks or clinker strip tiles, natural stone or wood





IT FITS INTO THE  
ENVIRONMENT  
WONDERFULLY, YET  
MANAGES TO ATTRACT  
INTEREST.

IT IS YOU WHO DECIDES  
ON THE LOOK OF YOUR  
TECHNICAL BUILDING!



## COMPLIANCE WITH STANDARDS

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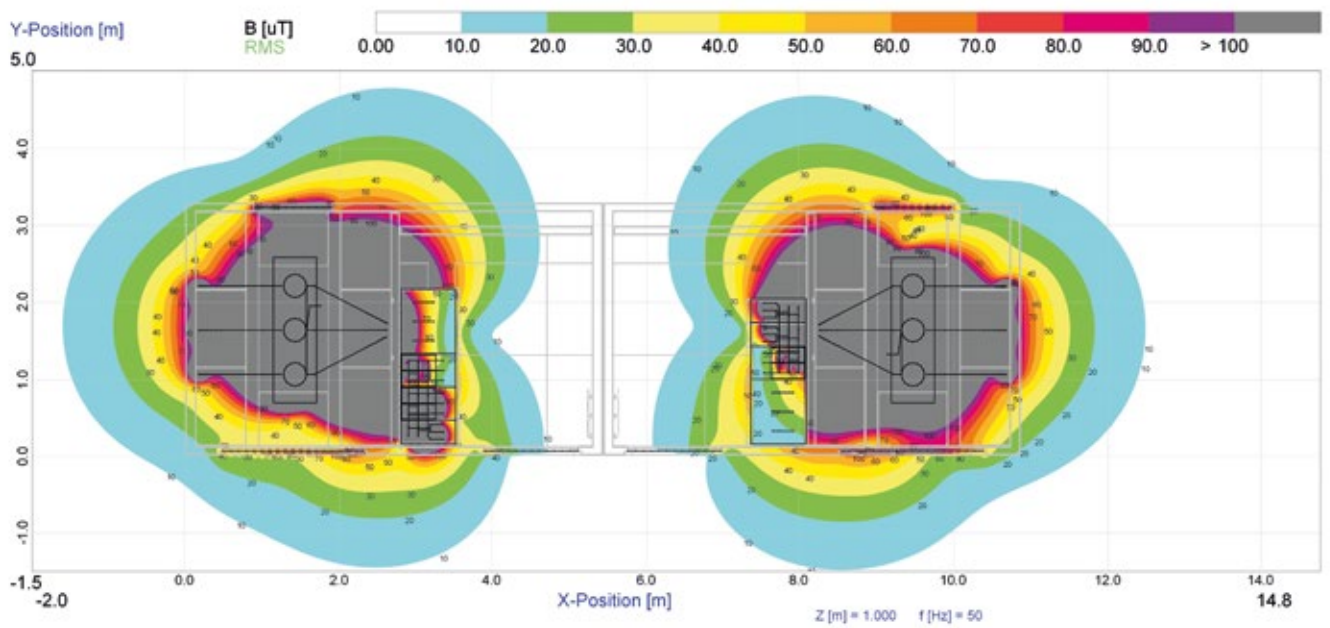
In addition to injury prevention, compliance with standard requirements and tests is the basic factor for the long-term reliability and lifetime of your transformer station.

That's why manufacturing in GRITEC is subject to Czech, German and European standards, decrees and directives. Our certified quality management system guarantees compliance with all the required regulations.

### COMPLIANCE WITH THE REQUIREMENTS OF THE EN 62271-202 STANDARD

- + Minimum ingress protection IP 23 DH; on request IP 34 D or IP 44 D, pursuant to EN 60529
- + Protection against arc short-circuit pursuant to EN 62271-202
- + Test of cover warming and class pursuant to EN 62271-202
- + Protection against electromagnetic fields (EMC) pursuant to the government regulation No. 291/2015 Coll., and EN 50499
- + Declaration of conformity, construction technology certificates and product certificates available on request





Graph of Electromagnetic Field Intensity

CERTIFIED  
PRODUCTS  
COMPLYING  
WITH THE  
REQUIREMENTS  
OF STANDARDS  
ARE A MATTER OF  
COURSE FOR US.



A test of electromagnetic compatibility (EMC).

# PROTECTION OF PERSONS

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## OPERATION AND PUBLIC SAFETY



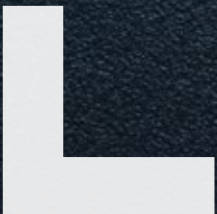
An arc short circuit resistance test  
according to IAC-A (20 kA / 1s)

If your station is located in a public space, it is necessary to ensure maximum protection of persons and safety for both pedestrians and your staff.

At GRITEC, we have developed a special protection concept that considers the protection of persons from potential risks and complies with standard requirements already in the production plant.

### SOME SAFETY REQUIREMENTS:

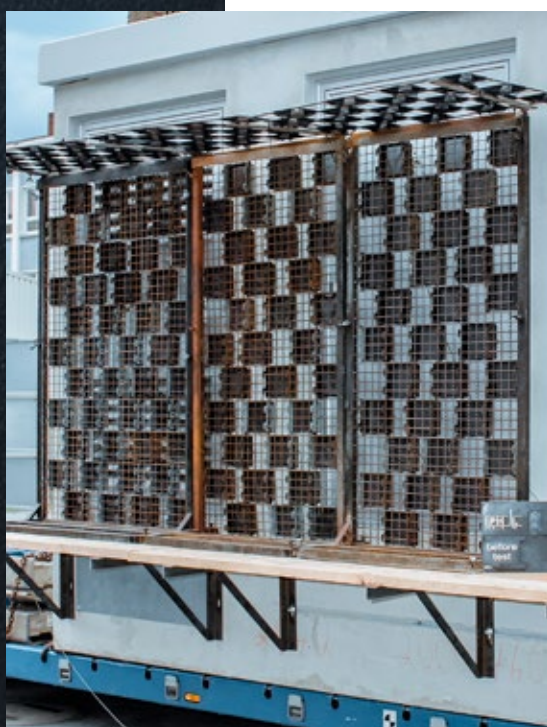
- + Protection against arc short circuit
- + Ensuring ingress protection (pursuant to EN 60529)
- + Electromagnetic compatibility (EMC)







A station in a public space providing electricity for car charging.



## ADVANTAGE IN SAFETY

An arc short circuit resistance test according to IAC-B [20 kA / 1s]

# GRITEC NOISE PROTECTION

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## ENSURING SILENCE EVEN IN RESIDENTIAL AREAS



Noise. A sensitive topic subject to strict hygienic limits imposed by government regulations. We have developed our own solutions, which mean you will enjoy undisturbed sleep.

- + Soundproofing of walls: depending on their thickness, they achieve from 47 dB (thickness 10cm) to 58 dB (thickness 20 cm). Another measure is wall doubling or interior panelling with perforated sheets and sound insulation.
- + Doors and gates: we offer single-wing doors with the attenuation of 18 to 40 dB. In nonstandard products, we can achieve up to 55 dB in single-wing doors and up to 52 dB in double-wing doors. Higher requirements can only be met by using a double door in a double partition: up to 66 dB.
- + Ventilation components: measures range from ventilation components with adequate soundproofed sheet ducts – installed under the roof or on the walls – to concrete ducts with attenuating panels.
- + Concrete ducts with built-in attenuating panels; they can be installed on a room cell as a roof component or separated by a thick subfloor or a prefab in front of the exterior wall.
- + Noise protection by soil: this very simple insulation method involves earth mounds, partial or complete embedding in a slope and location below ground as an underground station.





A soundproofed sheet duct.

# SAFETY UNLOCKS THE DOOR TO SUCCESS

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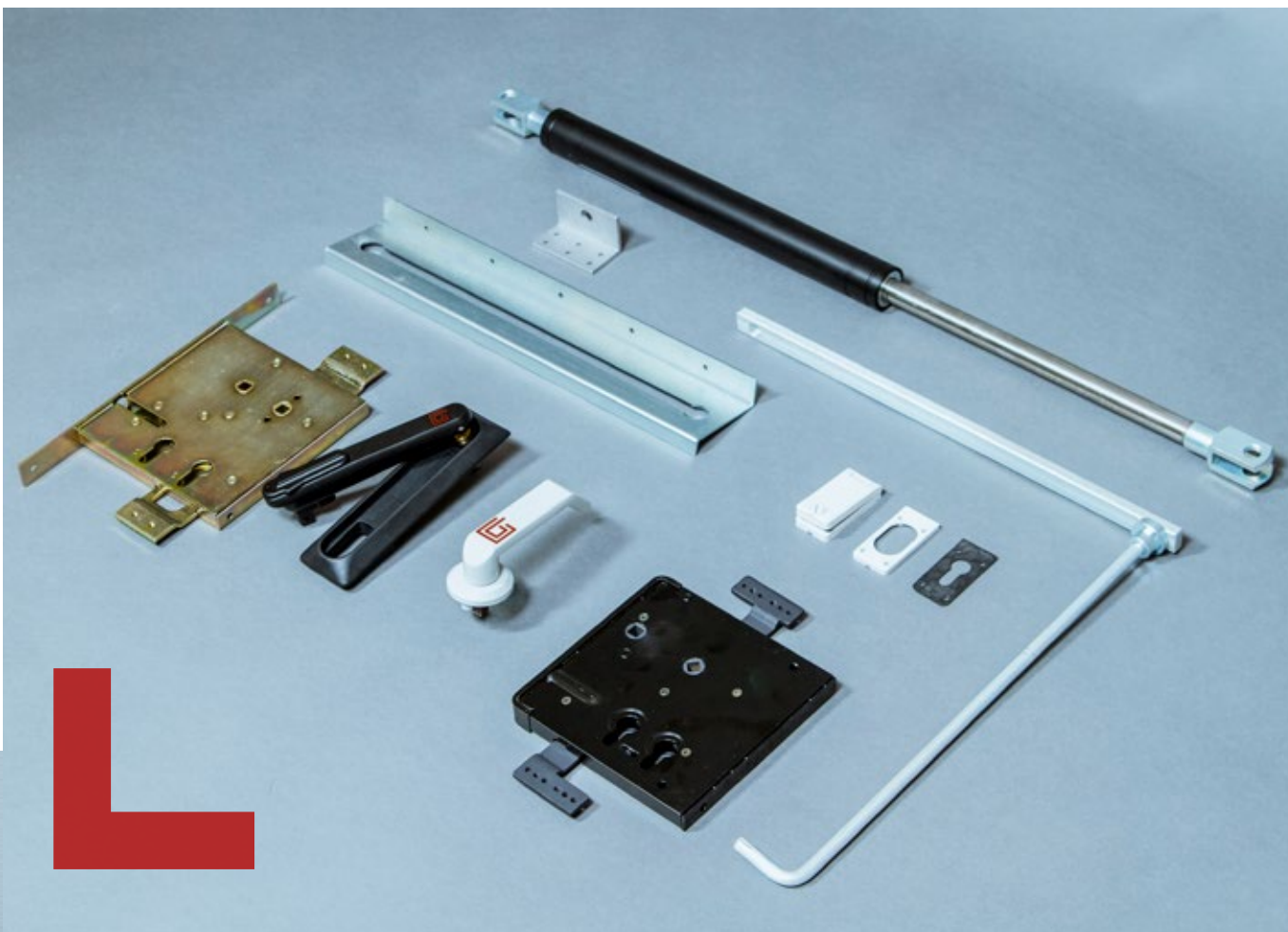


ON REQUEST, WE WILL PROVIDE YOUR  
TECHNICAL BUILDING WITH THE FOLLOWING:

- + + Protection against burglary thanks to special aluminium doors and ventilation components
- + Doors with inner hinges in the RC2 or RC3 safety class pursuant to EN 1627
- + A mechanical or electronic three-direction lock with the emergency exit function pursuant to EN 179
- + A lock cylinder, ES2 class pursuant to DIN 18257: 2015

There is no way someone will just break through a 10-cm thick reinforced concrete wall without getting noticed. This is why we build our doors and ventilation components in a way that makes break-ins as difficult as possible.





ALL DOORS AND  
VENTILATION  
COMPONENTS ARE  
CUSTOM-MADE IN  
OUR LOCKSMITH  
WORKSHOP.



# ALL FROM ONE MANUFACTURER

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## DESIGN, MANUFACTURING AND ASSEMBLY



All from one manufacturer. We can assist you with the management and coordination of the entire project. Thanks to our long-term experience, we can help with the whole construction process. We will speed your project up.

### SERVICE THAT WILL MOVE YOU FORWARD

- + Initial consultation to choose the best possible solution
- + Project documentation for ideal background materials
- + Certifications to help you stay on the safe side
- + Project coordination to make everything run according to plan
- + Professional assembly with emphasis on quality and safety
- + Renovation that will give your building a new look
- + Maintenance for long life and reliability



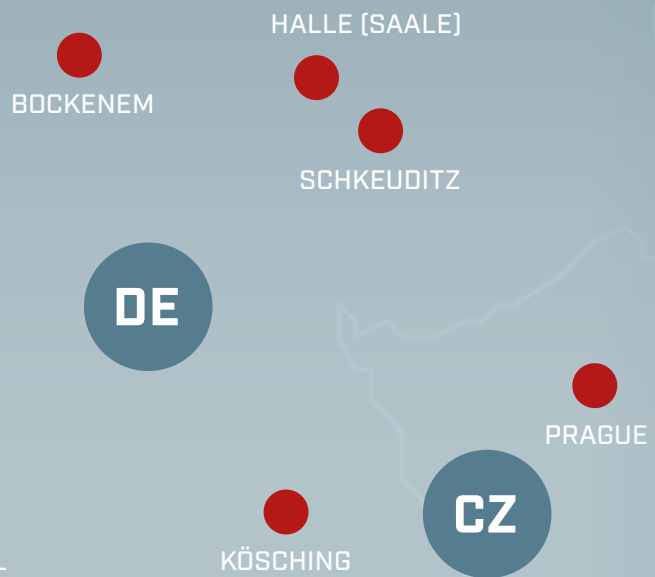


# GOOD ADVICE IS WORTH MILLIONS

TAILOR-MADE TO EVERY PROJECT

# GRITEC GROUP

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KÖSCHING



BOCKENEM



# MORE THEN 60 YEARS OF EXPERIENCE WITH CONCRETE

The GRITEC company was founded in 1963 in Waghäusel, Germany. In time, five production plants in Germany and the Czech Republic were added. In 1993, a subsidiary plant with its own legal arrangement was set up in Prague.

The GRITEC GROUP employs over 1300 people. In its state-of-the-art production plants, it manufactures over 10,000 room cells every year.



WAGHÄUSEL



SCHKEUDITZ



PRAGUE

WE KEEP THE >>>  
WORLD RUNNING

