

Certified IT-Data Centers for Highest Security

Room.cert Outdoor.cert MDC.cert Safe.cert



Functional security

IT Security – a Fundamental Management Task

Modern and successful companies stand or fall with the availability of their IT. The communication with clients, partners and suppliers takes place to a large extent through IT-supported media. However, even business transactions and also internal transactions, particularly processes in the fields of merchandise management, production and logistics all revolve around the pivotal issue of "information technology". Consequently, at any particular time there is a direct link between functional security of the IT, efficiency and existential security of the company. The theme IT security is therefore, whether we like it or not, one of the top agendas for every management.

Therefore, IT managers have to not only avoid risks, but also procure preventative security measures. This is the only path to avoid legal consequences resulting from personal error when things get serious. How important the protection of IT infrastructures and thereby the liability of those responsible is, can be last but not least recognised that more and more countries hereby introduce mandatory legal provisions.

Document Management Service/ Company Support Strategies Company Customer & Know how Partner Relationship Research & Process Development Management Internet/Intranet/ Social Media Logistics Sales and E-Commerce Marketing Production

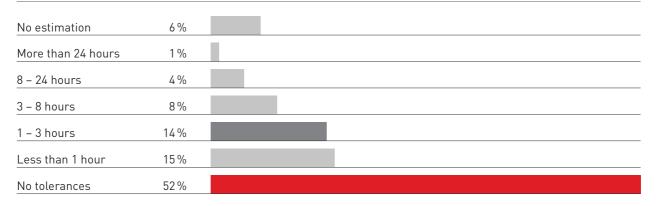
Functional IT Security Affects All Business Sectors

Functional Security

IT Security – Prerequisite for Sustainable Business Success

Especially in times of Big Data and Cloud applications, the importance of secure data storage is more important than ever. With continually increasing implementation of IT-based business processes, a downtime in IT for companies means the loss of the ability to react.

To survive and be successful in the market, the reduction of IT risks and the longest possible warranty for functioning communication processes is the highest premise. The consequences of downtimes in IT infrastructure are often not only financial losses, but also damage to reputation, not to mention unhappy clients and that means a high potential for endangering the existence of the company.



Acceptable Downtimes for IT Managers

A professionally planned IT infrastructure requires a high degree of functional security. Demand for IT security presents an existential theme for modern companies, because the availability expected amounts to more than 80% of users on 365 days in the year as well as 24 hours a day – and RZ-Products satisfy these demands!

Reasons for IT Losses

Fire	66%	
Human failures	62%	
Virus attacks	61%	
Hacker/Sabotage	39%	
Downtimes caused by service/maintenance	33%	
Floods	17%	
Terrorism	11%	
Acts of war	3%	
Earthquakes	2%	
Not specified	2%	

Functional Security

Avoiding Failures – Ensuring IT Availability

Constant assurance of functional security is the basis for highest available IT infrastructures and economic success. Downtime-free IT operation rests on the principle of IT-orientated room protection, coordinated with a redundant and efficient supply technology – as a whole concept – tested according to the latest European standards.

These EN standards orientate around:

Definition of dependability

The degree of dependability from functional IT processes defines the availability objectives of each company. The demanded availability is then to be guaranteed through systematic structuring of the IT infrastructures.

Risk potential

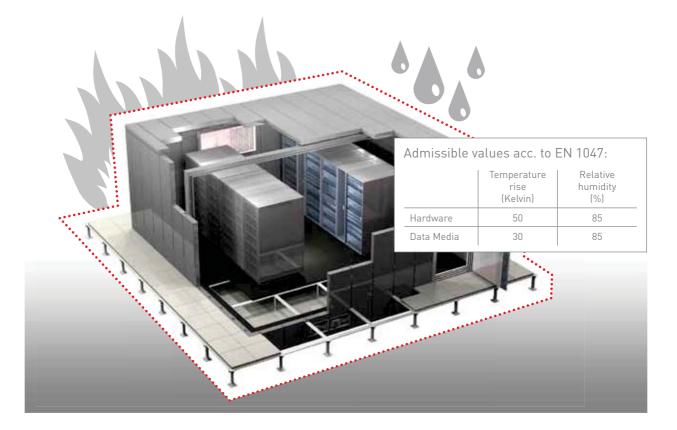
Risks such as fire, water, corrosive exhaust gases, sabotage, vandalism or dust have to be eliminated as best as possible.

Admissible values

The level of resistance of individual IT infrastructure concept is especially important when considering the effects of fires and moisture. The higher the resistance, the more secure the IT.

Maximum risk prevention

When all worst case scenarios are professionally avoided, damage to hardware is reduced, the chances of a breakdown are minimised and thereby the best possible measures for avoiding failures are established.



The GraniTe Product Range

The Best Possible Solution for All Demands



GranITe-Outdoor.cert

High-end solution for increased space requirements outside existing building structures. Erected outside the building it serves as an autonomous data center in architecturally-appealing design.

GranITe-MDC.cert

High-security and flexible data center in the smallest space. Created to protect small numbers of server racks- added bonus: installation during operation and offers a complete security & infrastructure system making best use of available space.

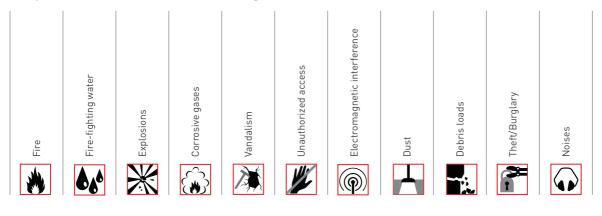
GranITe-Room.cert

"Room-in-Room" solution can be easily integrated, quickly and modular into existing building structures. With innovative product details, this IT room offers bestpossible physical security for protecting IT infrastructures.

GranITe-Safe.cert

Safes for protecting data carriers against burglary and fire. Top-level disaster protection and outstanding burglar protection are lifted to new levels by one common denominator.

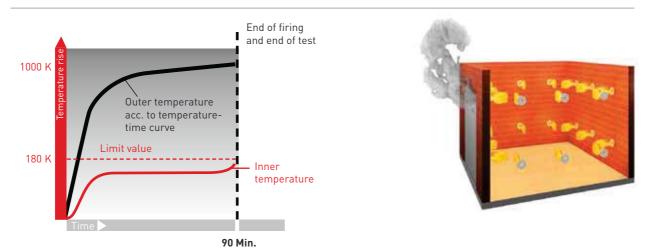
Top-Level Protection Against:



System Tests for Highest Security

Comparison Building Component vs. System Test

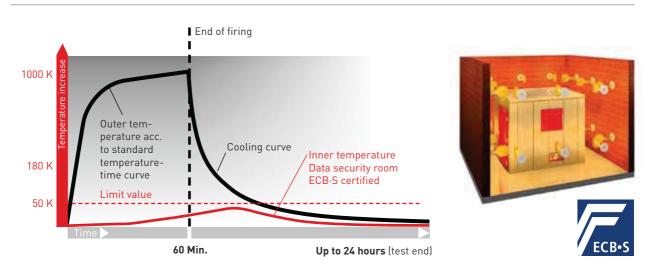
For standard building surfaces building component tests are adequate. The GranITe Series exclusively offer system-tested constructional IT infrastructure solutions. These are certified according to EN 1047-2 and guarantee high-end security. Professional and sustainable IT locations require an all-encompassing, system-tested infrastructure in order to guarantee demands for highest availability and absolute security.



Building component test F90 acc. to DIN 4102 (90 minutes test without cooling curve)

Measured inside temperature increase for an F90 building component test can withstand up to 180 K after 90-minutes firing. Relative humidity is not measured and can reach 100 % in only a few minutes depending on material. Test documentation is limited to components and has no meaningful relevance in relation to the complete IT room system.

Conclusion: pure building component tests offer only insufficient protection for your IT.



System test acc. to 1047-2 (Test duration 24 hours with cooling curve)

The inside temperature of an ECB-S test specimen may not rise above 50 K during the whole test (even during the cooling curve) and the relative humidity may not exceed a max. 85 %. Here a complete data security room with all components (door, air-conditioning & cable/ pipe openings) is tested for which is to be considered the possible area affected.

Conclusion: only system-tested products with the permitted limited values (50 K temperature increase/85 % relative humidity) for the IT offer the best protection!

GraniTe Products



System-Tested Security for Your Data

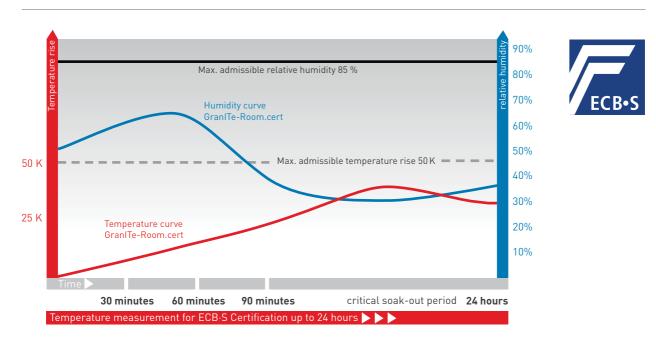
A F90 fire-resistance according to the general standards for buildings does actually fulfill the fire protection requirements for a building, but does not however cover the exposure limits for IT. Meeting the demands laid down by EN 1047-2 is therefore a 'must', in order to guarantee demands for high availability. Basic principle of an ECB-S certification is testing and constantly monitoring of the whole lifecycle of an IT-security room system – from development and production and on to assembly.

The GranITe.cert-Portfolio undergoes the most stringent & neutral quality control and thereby guarantees the highest quality & security level, not only for IT infrastructure but also for another important factor- the investment.

Comparison DIN 4102 and EN 1047-2

	DIN 4102 (F90-Building component test)	EN 1047-2 (ECB·S)			
Safety standard for	Building components	Data Rooms			
Objective	Protection of persons	Protection of IT			
Test type	Building component test	System test			
Firing period	90 minutes acc. to temperature-time curve	60 minuts acc. to temperature-time curve			
Cooling curve	No	Yes			
Period of temperature measurement	90 minutes	max. 24 hours			
Max. temperature rise	140-180 K	50 K			
Max. relative humidity	Not measured	85 %			
Impact test	No	Yes			
Neutral production quality control	Yes	Yes			
Neutral installation/assembly quality control	No	Yes			
Individual project registration	No	Yes			

Result of GranITe-Room.cert system test



Conclusion: The ECB·S certified GranITe products withstand the highest temperatures and undergo permanent quality controls.

ECB-S Certification

A True Accolade for Security

ECB·S – does it have to be? Oh yes! What we are talking about here is a whole lot more than a just name tag. The ECB·S certification has earned an accolade when we talk about fire protection. The European Certification Body GmbH (ECB) is the leading certification authority for security-related products on European and international stages. ECB only issues this prestigious ECB·S certificate when the test has been successfully passed. ECB·S – a necessity? Oh yes, a must!

That means high-end security with:

- Guaranteed, independent quality control
- System test according to EN 1047-2
- Proof of quality control for production and assembly by certified testing institute



If a data center is certified by ECB·S, it guarantees the highest possible system-tested fire protection level, especially for accommodating IT infrastructures. Moreover, a fully-neutral quality control guarantees the best possible protection for your investment – and can provide a strong argument for lowering the insurance premiums!



The ECB·S Certificate

authenticates the successful system test acc. to EN 1047-2 to an accredited and recognized testing institute and confirms the tested grade of quality. The certificate is issued by the EN 45011 accredited certification institute European Certification Body GmbH.

The ECB·S Test Label

can be seen to identify each product to prove that this particular product fulfills the demands of European standard EN 1047-2 and ECB-standard. Every test label displays the quality grade awarded by ECB and the unique project number belonging to the particular project.

This test label is proof of the continual monitoring of production & assembly quality and last but not least, guarantees that the characteristics and certified values of test pieces are identical to the produced product. Each project is registered at ECB before installation.

GraniTe Product Features

The Right Product for All Requirements

🕈 PRODUCT FEATURES	Room.cert	Outdoor.cert	MDC.cert	Safe.cert
Modular construction	✓	✓	✓	
Tested high-security door system	✓	✓	✓	
Door with multiple locking and anti-panic function	✓	✓	✓	
Certified cable duct system	✓	✓	✓	
Patented "Click" assembly method	✓		✓	
(Re)movable during running operations	✓		✓	
Low static floor loads	✓		✓	
Independent of locations	✓	✓	✓	✓
Low net weight	✓		✓	
Mechanical key lock	✓	✓	✓	✓
Electronic lock as option	✓	✓	✓	✓
Weather-resistant		✓		
High thermic and mechanical stability		✓		✓

🎓 TEST CERTIFICATES	Room.cert	Outdoor.cert	MDC.cert	Safe.cert
ECB-S Certificate acc. to EN 1047	✓	✓	✓	\checkmark
Impact test acc. to EN 1047-2	\checkmark	✓	\checkmark	
Burglar protection acc. to EN 1630	RC ² 2	WK ³ 2	RC ² 2	
Burglar protection WG ³ II acc. to EN 1143-1 (Type SE only)				✓
Protection against debris loads	\checkmark	✓	\checkmark	
Dust protection IP ¹ 56 acc. to EN 60529	✓	✓	✓	
Protection against fire-fighting water IP ¹ 56 acc. to EN 60529	\checkmark	✓	✓	
Protection against standing water	\checkmark	✓	\checkmark	~
Smoke tightness acc. to EN 1634-3	\checkmark	✓	\checkmark	~
Noise protection acc. to DIN 4109, DIN EN ISO 354, DIN EN ISO 140, DIN EN ISO 717	\checkmark	✓	\checkmark	
Explosion protection	✓	✓	✓	
EMC protection	✓	 ✓ 	✓	

¹ IP = International Protection Code

² RC = Resistance Class

³ WK/WG = Resistance Class/-Grade

GranITe-Room.cert

Professional Planning and Realization: Modular – Certified – Highly Available



GranITe-Room.cert

Modular – Certified – Highly Available

GranITe stands for security & resistance! The GranITe-Room.cert offers an extremely high degree of protection for IT infrastructures. Special characteristics of this IT room system make it into a truly high security wing for your IT.

The room offers proven protection against all physical dangers such as fire, break-ins, vandalism, water or even flying debris. Utilities (ventilation, electrical & energy-related technology) are ideally integrated into the security concept.

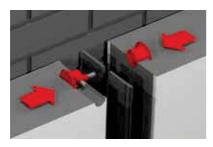
And additionally, a large number of unique technological features provide just as many advantages in IT operation. From a constructional perspective, the GranITe-Room.cert plays a pioneering in the field of room efficiency with its modular system and full use of available standing space (practically next to the walls). Whether in the basement or top floor, all available space will be put to use and that means from 5 up to 5,000 m².

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Patented "Click" Assembly Method

- Short assembly times with top-assembly-quality
- (Re)movable anytime
- Room efficiency by optimised use of space
- Guaranteed protection against manipulation and burglary
- Interior protected connection system

Optimized and efficient usable volumes top-end security level





Certified Cable Duct System

- Modular, tested and certified cable duct system
- Space-saving, clearly laid out, clean
- Flexible use of modules from different suppliers
- No critical fibre material



Tested High Security Door

- Tested personal protection as escape door (acc. to EN 179 and EN 1125)
- Certified property protection
- Modern locking system
- Self-closing with patented 6-point interlock

Security and flexibility through tested cable ducts



High-Quality-Door-System offers users safety and comfort



Product Details

- Modular system of construction (wall, ceiling and floor elements)
- Steel elements, filled with highly efficient insulation
- High security door system with 6-point interlock, monitoring contacts, mechanical key-lock and sliding door closer
- Round cable duct DN200
- High carrying capacity through load-carrying ceiling
- Independent of location
- (Re)movable during running operation
- Low static floor loads

Test Certificates

- ECB·S certification acc. to EN 1047-2
- Impact test acc. to EN 1047-2
- El180 Building component test (external) acc. to EN 1363-1 and EN 13501-2
- El120 Building component test (internal) acc. to EN 1363-1 and EN 13501-2
- Burglar protection RC 2 acc. to EN 1630
- Resistance to flying debris
- Dust protection IP 56 acc. to EN 60529
- Extinguishing-water protection IP 56 acc. to EN 60529
- Protection against standing-water
- Smoke tightness acc. to EN 1634-3
- Noise protection acc. to DIN 4109, DIN EN ISO 354, DIN EN ISO 140, DIN EN ISO 717
- Explosion protection
- Escape door certification acc. to EN 179 (optional EN 1125)
- EMC protection acc. to EN 50147







Equipment Options

- Electronic lock, PIN-Code lock, motor lock, etc.
- Sliding door closer inclusive electromechanical detection (with/without smoke switch unit), electro-hydraulic door-drive
- Special cable ducts
- Ventilation or overpressure slides (also available as combined system)
- Electrical system control
- Lighting system

Test Re

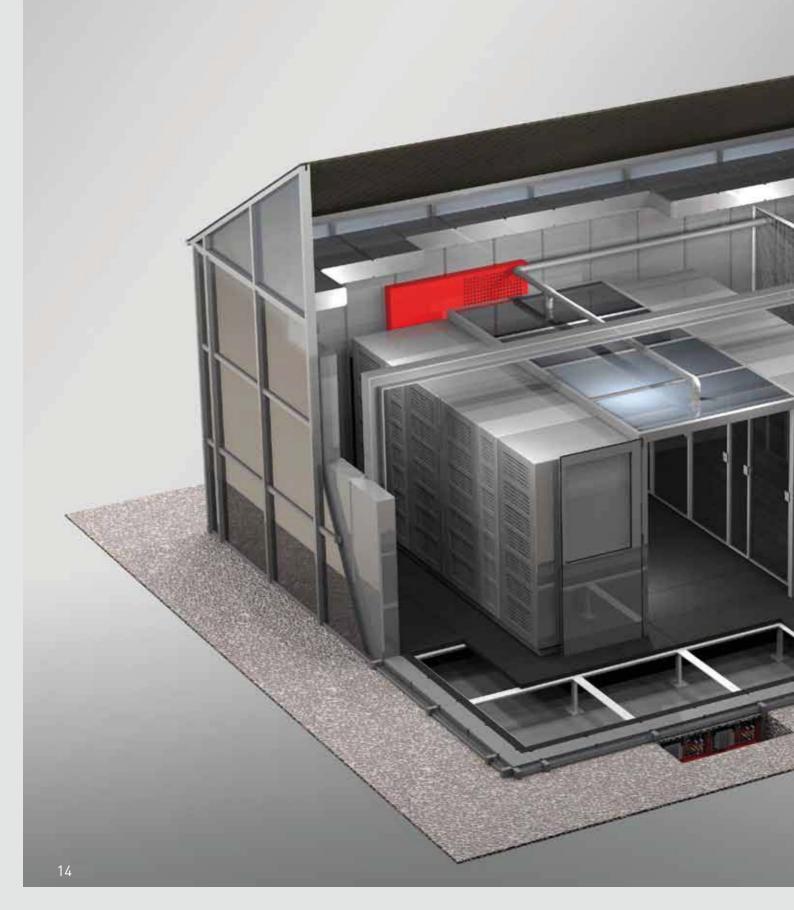
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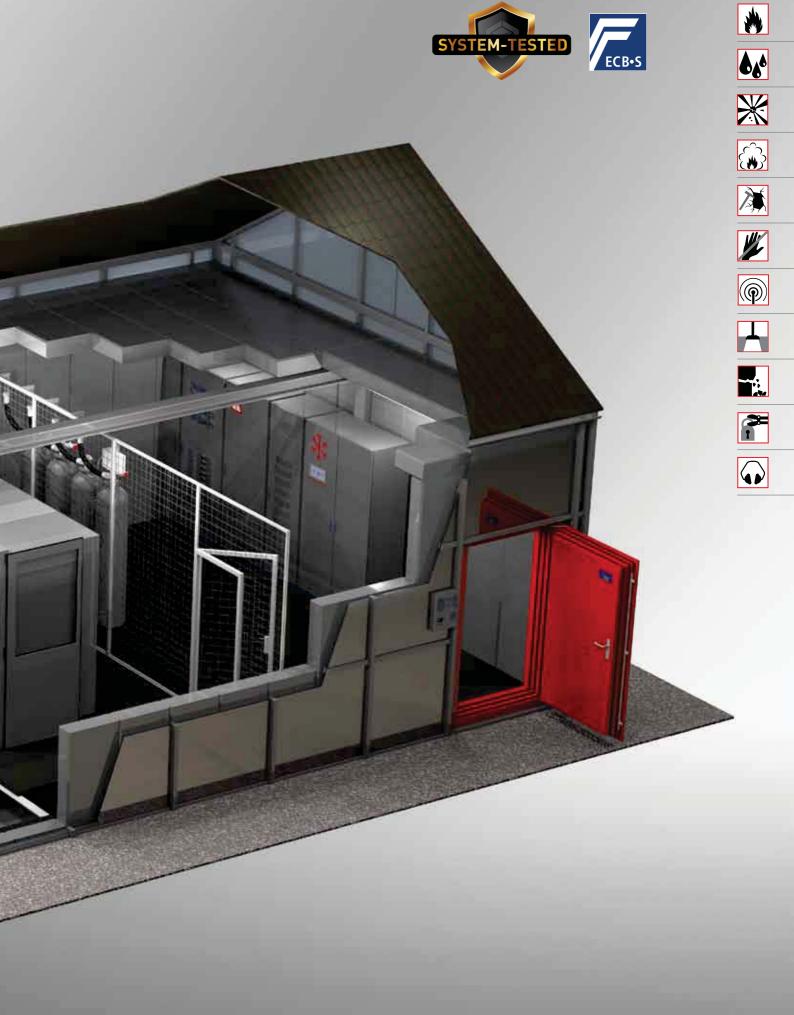
- Raised floor with various layers and designs
- Fire alarm system
- Early fire-warning system
- Monitoring & energy efficiency systems
- Extinguishing unit
- Burglar alarm system
- UPS
- 19" rack
- Access control system

GranITe-Outdoor.cert

The Secure Outdoor Data Center Individual – Certified – Customized Design







GranITe-Outdoor.cert

Individual – Certified - Customized Design

GranITe-Outdoor.cert presents the ideal synthesis between the highest construction IT security and aesthetical design. This autonomous IT-secure building can be positioned simply & quickly on any piece of open land.

It really is no matter at all whether permanent solution or backup data center: GranITe-Outdoor.cert offers a high degree of security and protection for high availability acc. to stringent national and international standards.



ECB·S-Tested Building Structure

- Savings through classical Roomin-Room system
- Quality control monitored installation acc. to ECB·S classification R60D by recognised testing institute
- Economical high-end security solution
- Usage-independent application for the building
- Multi-level constructions possible
- Modular building structure

System-tested, certified building – highest security for your IT



Design-Orientated Facade

- Fitting design, in addition to highend security and functionality
- Weather-resistant main framework leaves ample freedom for designing facades and roof constructions



Optically pleasing in corporate design



Outdoor-Tested materials

- Building of non-inflammable materials (A1)
- Fulfills the highest demands for thermal insulation
- Minimised heat bridge
- Extremely high weather-resistant and solid materials
- Application of officially certified materials
- Short official procedures (planning permission)

Intelligent building solution economical, flexible, energysaving

Product Details

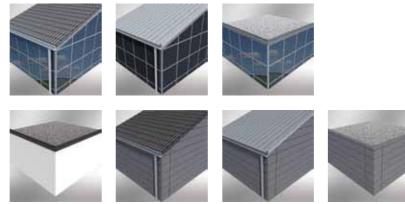
- Modular system construction of wall, ceiling and floor elements
- Many attractive options for the outer facade
- Extremely high thermal and mechanical stability
- Door with multi-lock system and anti-panic function
- Mechanical key-lock
- Fire-resistant cable & tube ducts
- Weatherproof
- Multi-level (optional)
- Independent of location



Show Individuality

GranlTe-Outdoor.cert combines functionality with an appealing design: Operators have the possibility of choosing between different facades such as with glass, metal or plaster. Even the roof construction offers imaginative freedom for individual optics, such as a flat roof, pitched roof or even a single pitch roofall is possible – creativity literally knows no limits!

A harmonious integration with already existing architecture, but also the revaluation of tired environments with the help of futuristic elements- nothing is impossible.



Test Certificates

- ECB·S Certification acc. to EN 1047-2
- EI180 Building component test acc. to EN 1363
- Burglar protection WK 2 acc. to EN 1630
- Door system optional in WK 4
- Dust protection IP 56 acc. to EN 60 529
- Extinguishing-water protection IP 56 acc. to EN 60529
- Protection against standing water
- Smoke tightness in line with EN 1634-3 (DIN 18095)
- Impact test acc. to EN 1047-2
- EMC protection test
- Explosion protection

Equipment Options

- Electronic lock, PIN-Code lock, motor lock, etc.
- Ventilation and overpressure slides
- Electric system control
- Lighting system
- Room floor or raised floor with various layers and designs
- Fire alarm system
- Early fire-warning system

- Fire-extinguishing system
- Monitoring & energy efficiency systems
- Access control system
- Burglar alarm
- UPS
- 19" rack
- Weather canopy (door)

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GranITe-MDC.cert

Functionally Secure – Certified – for Small IT Locations

GranITe-MDC.cert is well-known & respected for its space-saving features, predestinating itself for smaller IT locations. Despite its compact layout, the GranITe-MDC.cert is no less effective than its larger counterparts when looking at security!

Installation is also possible during running operations for already existing IT-racks and that without having to shut down!

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Patented "Click" Assembly Method

- Short assembly times with top-assembly-quality
- (Re)movable anytime
- Room efficiency by optimised use of space
- Guaranteed protection against manipulation and burglary
- Interior protected
 connection system

Optimized and efficient usable space high-end security level



Certified Cable Duct System

- Modular, tested and certified cable duct system
- Space-saving, clearly laid out, clean
- Flexible use of modules from different suppliers
- No critical fibre material

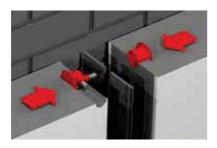


Tested High Security Door

- Tested personal protection as escape door (acc. to EN 179 and EN 1125)
- Certified property protection
- Modern lock system
- Self-closing with patented 6-point interlock

Security and flexibility through tested cable ducts

High-Quality-Door-System offers safety and comfort







Product Details

- Modular system construction (wall, ceiling & floor elements)
- Elements made of steel, filled with highly-efficient insulating materials
- High-security door system with 6-point interlocking, monitoring contacts, mechanical key lock and sliding door closer
- Innovative round cable ducts DN200
- Innovative and patented "Click" assembly method
- Independent of location
- (Re)movable during running operations
- Low static floor loads



Test Certificates

- ECB·S certification acc. to EN 1047-2
- Impact test acc. to EN 1047-2
- El180 Building component test (outside) acc. to EN 1363-1 and EN 13501-2
- El120 Building component test (inside) acc. to EN 1363-1 and EN 13501-2

Equipment Options

- Electronic lock, PIN-Code lock, motor lock, etc.
- Sliding door closer inclusive electromechanical detection (with/without smoke switch unit), electro-hydraulic door-drive
- Special cable ducts
- Ventilation or overpressure slide (also available as combined system)

- Burglar protection RC 2 acc. to EN 1630
- Resistance to flying debris
- Dust protection IP 56 acc. to EN 60529
- Extinguishing water protection IP 56 acc. to EN 60529
- Protection against standing water
- Smoke tightness acc. to EN 1634-3
- Noise protection acc. to DIN 4109, DIN EN ISO 354, DIN EN ISO 140, DIN EN ISO 717
- Explosion protection
- Escape door certification acc. to EN 179 (optional EN 1125)
- EMC protection acc. to EN 50147
- Electrical system control
- Lighting system
- Raised floor with various layers and designs
- Fire alarm system
- Early fire warning system
- Monitoring & energy efficiency systems
- Extinguishing unit
- Burglar alarm system
- Highly-efficient cooling system
- UPS
- 19" rack
- Access control system

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GranITe-Safe.cert

Flexible - Certified - Secure



As the price for multiple memory is steadily sinking, demand for memory is rising at a greater rate. Often the physical aspect of data storage onto carriers such as CDs, DVDs, hard-discs is seen to assume a lower priority. A private data loss raises anger; most of us can overcome the consequences in time. But what raised anger is for a private person can have disastrous consequences for a company and in the worst case, legal consequences.

The Safe.cert-Series protects your data carrier comfortably and sustainably against fire, theft, access as well as dampness. Depending on the security requirement, there are 10 model types available in different classifications and variable inside fittings.





All safes excl. contents/deco

Product Details

Туре	S11	S12	S13	S14	S15	SE11	SE12	SE13	SE14	SE15
Fire protection S 120 DIS	✓	~	~	 ✓ 	✓	✓	~	 ✓ 	~	✓
Burglar protection (VDS/ECB·S)	_	_	-	_	_	WG II	WG II	WG II	WG II	WG II
External dimensions (mm)		,								
Height	732	1052	1295	1850	1850	732	1052	1295	1850	1850
Width	786	786	786	786	1195	786	786	786	786	1195
Depth	918	918	918	918	918	918	918	918	918	918
Housing depth excl. door	770	770	770	770	770	770	770	770	770	770
Inside dimensions (mm)		1	1				1	1		1
Height	332	652	895	1450	1450	332	652	895	1450	1450
Width	444	444	444	444	855	444	444	444	444	855
Depth	470	470	470	470	470	470	470	470	470	470
							1	1	1	1
Capacity (l)	71	139	191	310	590	71	139	191	310	590
Weight (kg)	288	380	445	631	922	320	460	543	785	1150
Floor anchor incl. Anchor material	_	_	_	_	_	~	~	~	~	_
Colour: housing RAL 7035 light	nt frey, door	RAL 3020 tr	affic red				1			
Special colours of paint and le	eft-opening o	loor upon re	equest							

Individual Interior Fittings for **Highest Efficiency**



Fixed shelf 442 x 420 (W x D in mm) 851 x 420 (W x D im mm)



Pull-out shelf 400 x 460 (W x D in mm) 807 x 460 (W x D im mm)



Divider for pull-out shelf Vertical separation for width and depth



Locker level Various heights, separately

Lock Variations for Highest Security



Handle with double bit security lock



Electronic key-combination lock



lockable, one or two doors

Test Certificates

- Fire protection S 120 DIS acc. to DIN 1047-1
- Burglar protection WG II acc. to EN 1143-1 (only type SE)
- Protection against standing water
- Smoke tightness acc. to EN 1634-3





References

We Secure the IT Infrastructures of Our Clients. Every Day. Worldwide.

More than 1,000 satisfied clients have made use of our knowledge and long experience in the development, production and realisation of security-related products. The list includes companies in industry and telecommunication, banking, insurance, and even energy utilities, authorities as well as IT service providers.



LAND-DATA GmbH Outdoor high-performance data center- consulted, constructed and convinced by design and functionality Data and Facts:

Obiect: Branch: $30 m^2$ Size:

Outdoor data center including system-tested Room-in-Room system in line with EN 1047-2 IT service provider for agriculture

"The data center grew with our growth, as is the case with lots of other companies. Eventually the time comes when the data center no longer complies with fire, smoke and water damage regulations as stipulated by our security demands, not to mention our clients. In connection with a redundantly equipped second location, in which data architecture is completely mirrored, the high-performance data center offers LAND-DATA and the agricultural scene a real head-start over the competition." Andreas Kanngießer (responsible for technical infrastructure)



Ingersoll GmbH New data center offers security and best operational availability Data and Facts: Obiect: Construction of a modular Room-in-Room system, TÜV certified acc. to step 3 Toolmaker Branch: $45 m^{2}$ Size

"Our IT accommodates all company-relevant data, ranging from customer contacts, through the execution of orders, and even to the telephone system. A breakdown resulting from insufficient IT solutions would mean almost paralysis for the company. The sustainability and scalability of our IT is a factor we absolutely have to take into consideration."

Andreas Kowol (EDP Dept.)



Green IT Optimising Energy Consumption

Green IT i.e. Energy Efficiency is an important factor in modern data center construction. Not only the whole planning and realisation but also the following operation should be appropriately planned.

Server rooms, Mini Data Centers and Outdoor Data Centers of the GranITe-Series are conceived on the basic principle of optimum raw material utilisation, with as little offcut and waste as possible. And not forgetting the targeted use of recyclable materials as well as very clean assembly and installation of IT rooms, with negligible or no negative influence on the environment. The objective is to achieve sustainability.

The ability to go far into the future and long service life are specially guaranteed here through flexible solutions: uncomplicated dismantling & re-assembly avoid unnecessary and costly new acquisitions. Furthermore, long thought-out ideas and future-orientated concepts guard against unpleasant surprises demanding subsequent costs.

Energy consumption of data centers and server rooms is directly dependant on the quality of installation. And finally it is the tightness and quality of the ceiling & wall elements which is decisive for optimum cooling of the server and thereby for energy efficient operation.

Intelligent Solutions for Highly Efficient Data Centers



QuartzITe

With IT security solutions, the QuartzITe-Series from RZ-Products offers the solution for secure IT Infrastructures. Server Rooms, Outdoor Data Centers and Mini Data Centers of this product line are equipped with F90 or F90+ (compliance with limiting values of EN 1047-2 for 30 minutes) fire protection elements and thereby guarantee IT functional security at an astonishingly high level.



MonIToring

The Monitoring System of RZ-Products makes a decisive contribution towards professional energy management and uninterrupted monitoring of IT. They do not only detect & display faults, they can also considerably enhance the efficiency of IT systems through analysis of the energy consumption.



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