Rittal – **the time has come . . .**

. . . for the Data Centre of the future

RITTAL®

Sustainable energy efficiency!

Energy

Outstanding climate protection and energy efficiency with "Green IT".
- Modular, scalable IT infrastructures
- Uninterruptible power supplies and climate control systems with a high level of efficiency
- Optimised processes in the manufacture and use of products reduce energy consumption and protect the environment.

Security

- Perfect system and data protection through optimum physical IT protection for permanent business security
- Complete Data Centre solutions
- Modular, scalable IT infrastructures
- Tested, certified IT security rooms and safes
- Process analyses, consultancy, planning, execution
- Disaster recovery and business continuity management

We believe that one of our main tasks is to ensure that the use of information technology is kind to the environment and helps to conserve resources throughout its entire lifecycle.

One aspect of this is to utilise the available energy resources as sparingly as possible. With this in mind, at CeBIT 2008 **Rittal together** (Rittal, Lampertz, Litcos) will be presenting concepts and complete solutions for the Data Centre of the future that is efficient, secure and eco-friendly in every respect. **Rittal together** will be operating the system live, to prove that we can offer efficiency in every dimension, with no loss of power. In fact, we have taken our philosophy a crucial step further.

EFFICIENCY

Efficiency e[4] is synonymous with conserving natural and financial resources – savings that benefit both the environment and the company.

Think integrated – utilise synergies, join forces.

AVAILABILITY

Availability
- Redundancy, scalability, flexibility and modularity, thanks to holistic solutions cast from the same mould.
- Technical and organisational requirements:
  – for permanent IT availability (24/7)
  – to safeguard company-critical processes and data

SYNERGY

Synergy
Maximum exploitation of all synergy potential via concepts and solutions from a single source.
- The comprehensive problem-solving expertise of the **Rittal together** experts helps to minimise interfaces and complexity, and accelerate procedures.
- A global presence and worldwide service power.
- Global availability of our systems, and the expertise of a market leader, for total benefit of usership.

. . . because we don't believe in half-measures

Rack

As the world's leading manufacturer of server and network enclosures, Rittal offers a comprehensive product range with an optimum accessory portfolio.

This allows you to create the ideal requirements for individual configuration of your IT infrastructure. The benefits to you: Greater freedom, greater flexibility, greater reliability.
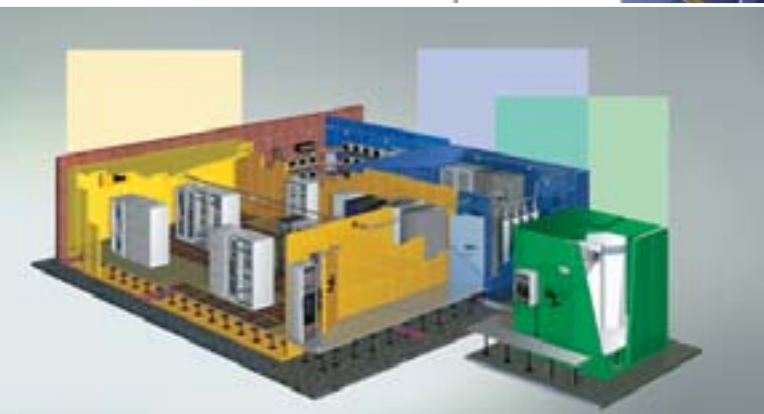
Power

This module ensures a constant, uninterrupted power supply.

It includes power distribution inside the rack and Data Centre with the Rittal Power System Module PSM and power protection with the modular UPS Power Modular Concept PMC.

Cooling

Climate control concepts from Rittal help to minimise investment and operating costs, and maximise investment security.

With scalable, rack-based climate control concepts such as Liquid Cooling Package or room cooling with innovative CRAC systems in conjunction with Free Cooling, cooling costs can be significantly reduced.

Complete room concepts

Lampertz develops and supplies solutions that are precisely tailored to your company's requirements. From basic protection right through to high-MTBF protection.

For example, what effect would downtime of one minute, one hour or one day have on your operation? How great would the financial damage or loss of image be?
We supply modular infrastructure solutions and Data Centres from a single source – from planning right through to turnkey installation.
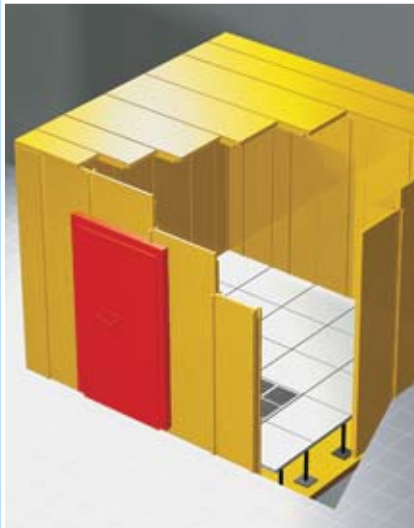
Analysis, planning, management

These days, IT processes are success-relevant management tasks for any modern company. IT managers, in particular, face huge challenges in this regard, specifically in relation to:
● On-going cost-pressure
● Increased liability risks for those responsible
● Rising data security requirements
● Growing fusion between the application level, systems engineering and the IT infrastructure.

Room

Room system LSR 18.6 E
- Comprehensive protection from elementary risks
- Effective, resource-optimised design of the room modules
- Systems may be dismantled and reassembled, for maximum investment security
- Energy saving, thanks to highly effective room sealing
- Optimum quality assurance, thanks to neutral quality monitoring during the assembly phase
- Maximum physical protection for a superior insurance rating

Raised floor
- Heavy-duty/control room floor with an earthable rubber surface
- Steel ventilation plates (10000 kN)

Extinguisher system
- Gas extinguisher system with the non-toxic extinguisher medium Novec 1230
- Central extinguisher system and interfaces to superordinate central fire alarm systems

RimatriX5

RimatriX5
- Modular, scalable, rack-based IT infrastructure
- Maximum operational reliability and availability coupled with optimum cost-effectiveness
- Individual solutions with standardised modules
- Flexible arrangement/configuration thanks to a rack-optimised design
- Optimum utilisation of space, due to high packaging densities
- Perfect interaction between security and remote management
- Servicing and expansion while the system is operational

Efficiency analyses must be comprehensive, and include everything from the initial acquisition, to operation, through to maintenance. With this in mind, the RimatriX5 from Rittal offers decisive cost benefits on all criteria:

- Reduced planning costs, thanks to modular, scalable components
- Lower investment costs coupled with investment security, thanks to maximum flexibility
- Lower operating costs, thanks to energy-efficient systems for cooling and power supply plus cost-effective adaptation to your requirements
- Reduced downtime and hence lower costs, thanks to a high level of availability plus remote maintenance and administration
- Minimal installation and expansion costs through plug & play technology and technical modifications whilst the system is still operational

Rack
- Perfectly planned cable management
- Load capacity of up to 1000 kg within the 482.6 mm (19˝) installation
- Individual configuration with an extensive range of accessories
- Symmetrical assembly for maximum usable interior volume
- Numerous approvals and certifications
- Nanoceramic coating for maximum surface protection

Power

UPS PMC 200
- Genuine rack-mounted modularity (safe swap)
- Reduction of average MTTR by up to 60 %
- Very high operating ratio for a high energy efficiency of 95 %
- Modular scalability to regulate the optimum load range

Ri4Power Form 2-4
Low-voltage systems
- All components may be assembled single-handed
- Indoor system – Housed distributor system in a functional space
- Protection category IP 2X to IP 54
- Type-testing to IEC 60 439-1

Power Distribution Rack PDR
Sub-distribution up to 250 A

- PDM may be retrofitted whilst operational
- Fully shock-hazard protected
- VDE-certified
- Redundant infeed supported
- Direct, wired connection to the PSM rail

Cooling

Circulatory climate control
- Optimised functional principle (heat exchanger, fan) means up to 30 % less energy consumption with the same space requirements

IT chiller
- Up to 50 % energy saving with the Free Cooling system
- Energy saving, thanks to the use of speed-regulated pumps
- Monitoring and control via network connection

Piping system
in the Data Centre
- Pumps with EC motors and output-/demand-based speed control

LCP
- Precision high-density cooling up to 30 kW/rack
- Hot spots are avoided

Water/water heat exchangers
- Enquire about operating statuses and make settings via the Web (TCP/IP)
- Redundancy thanks to the use of a twin pump with 24 h alternating operation
- Energy-saving, thanks to speed-regulated pump system
- Suitable for use when system separation is required between the glycosol system (outdoor sector for free cooling) and the cold water in the climate control system (indoor sector with LCP/CRAC system)

Monitoring

Water warning system/
leak detection
- Monitoring components with leak location
- Sensor cable to detect conductive liquids
- Connection to the Rittal CMC-TC

Early fire detection
- Smoke extractor system to detect fire even at the pyrolysis phase. Adjustable sensitivity
- 400 times more sensitive than conventional fire detectors

Video monitoring
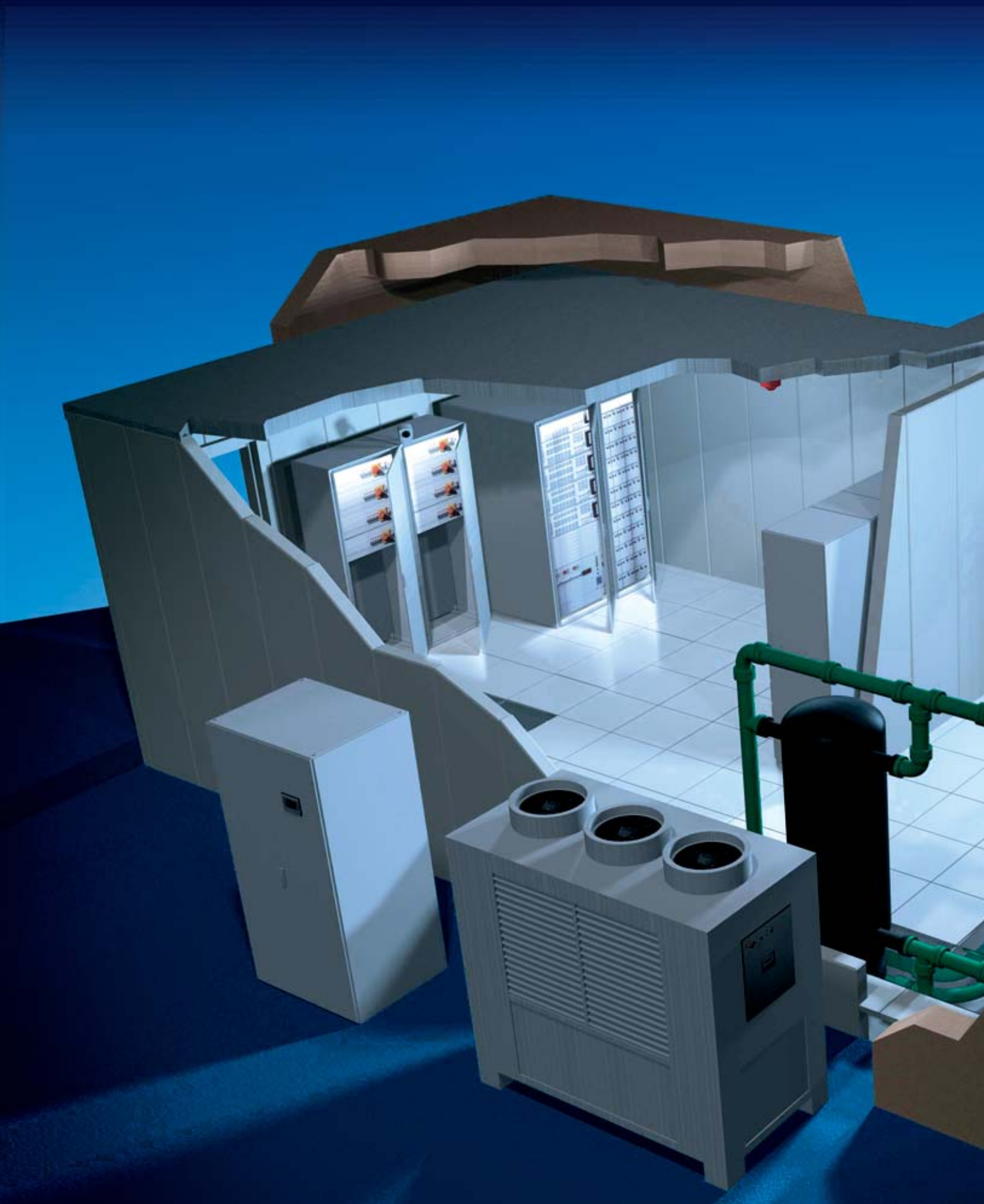- Video and function monitoring with the IP network camera and CMC-TC

Access control system
- Freely programmable access control system to BSI standard

Security

Modular security management
- Logging of all safety-relevant parameters in and on IT racks, such as temperature or humidity, by the CMC monitoring system.
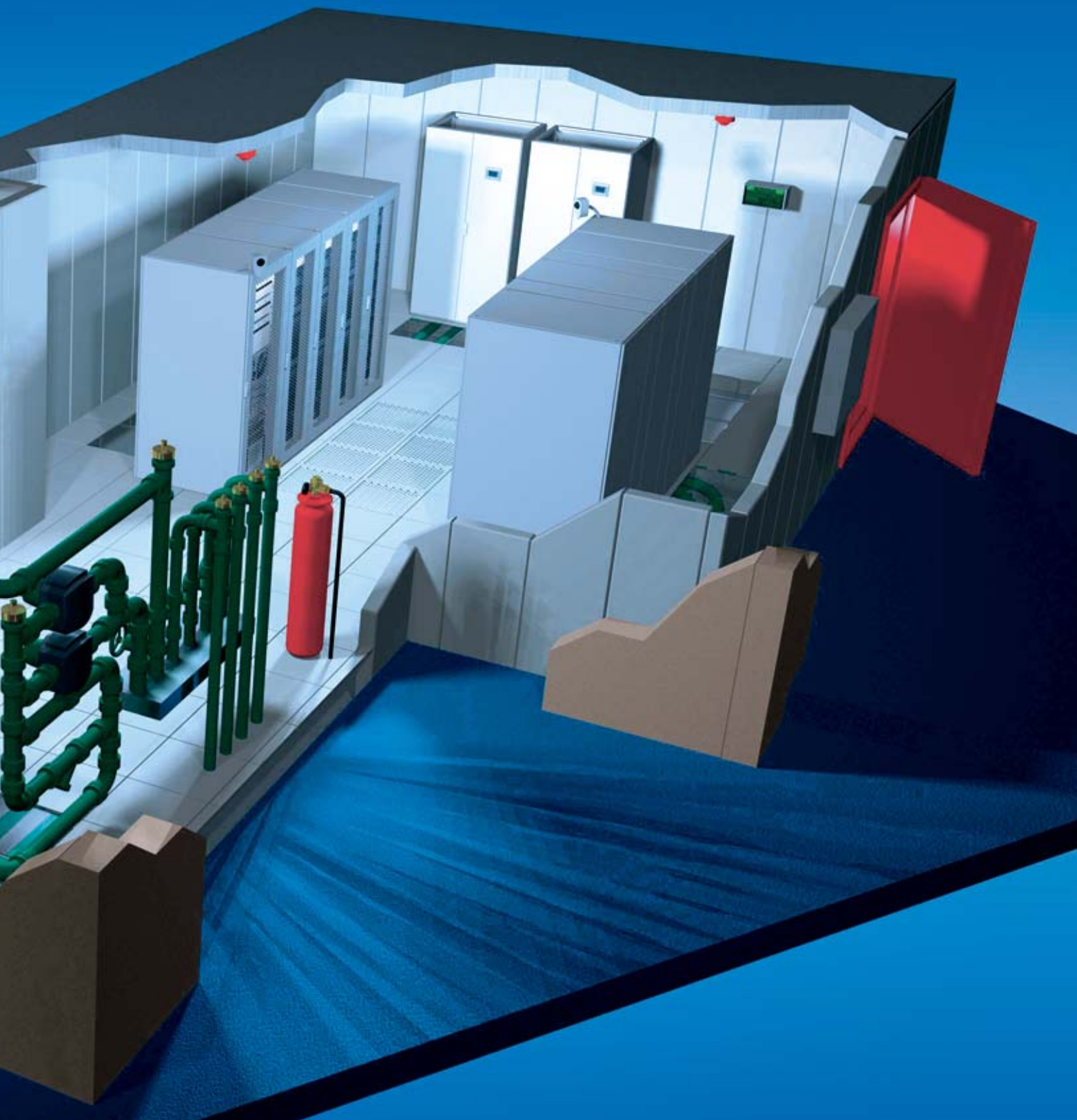
See the "green" Data Centre from Rittal – live in action!

The future has never been so close: On an area of 200 square metres, Rittal presents the fully functional "Live Data Centre" of the future. Experience "Green IT" up close and personal at CeBIT 2008. In Hall 12, we will be installing a high-MTBF,

efficient Data Centre, complete with raised floor, high-density climate control, free cooling, and power distribution & back-up. The "green" Data Centre is built into a fully functional Lampertz IT security room, which is fully equipped with the relevant partitions, security doors, raised floors, sliding climate control doors, and much more besides. Rittal has devised an IT security room especially for this event, which

allows visitors to experience a fully functional Data Centre live in action. The "Live Data Centre" from **Rittal together** covers all the relevant benefit dimensions with the efficiency formula e⁴. The modular IT infrastructure RimatriX5 is integrated into a Lampertz high-availability room with maximum protection category ECB-S to DIN EN 1047-2. This is both an impressive demonstration and a testimony for the future.

The "Live Data Centre" bears witness to **Rittal together's** comprehensive Data Centre expertise – everything from a single source, all cast from the same mould, from analysis, planning and project management right through to turnkey installation of all works and an individual after-sales service.

Rittal together – the Top Team

The comprehensive problem-solving expertise of the **Rittal together** experts (Rittal, Lampertz, Litcos) helps to minimise interfaces and complexity, and accelerate procedures. Rittal generates this value-added for customers from the harmonious interactions within its own corporate structure. **Rittal together** offers a world-wide alliance with a global presence and international service power. Under the umbrella of the Friedhelm Loh Group, Lampertz is one of the world's leading suppliers of physical data and system protection. Rittal relies on Litcos for planning and object management.

Rittal together – Complete IT competence

The comprehensive, integrated range of products, solutions and services from Rittal together

Analysis and planning	Construction	Service

● Analyses and consultancy
● Risk analyses
● Efficiency analyses
● Organisation and process analyses
● Planning and implementation
● Site management/execution/
  general contractor
	● Modular IT security rooms
	● Room technology/raised floor
	● Power distribution/back-up
	● Climate control/refrigeration
	  engineering
	● Rack-based IT infrastructure
	● Data and network technology
	● Fire protection and extinguisher
	  systems
	● Access protection
	● Security/video/monitoring
		● Disaster recovery management
		● Remote management
		● Maintenance contracts
		● Hotline
		● Certification

Rittal
IT infrastructure
Worldwide perfect system solutions for Data Centres. In RimatriX5, Rittal offers rack, power, cooling, security and monitoring from a single source.

Lampertz
Physical IT security
One-stop suppliers of security-critical Data Centre structures. Modular IT security solutions, comprising IT rooms, functional reliability, maintenance and repair.

Litcos
Business continuity management
One of Europe's leading companies offering analytical consultancy and holistic planning of Data Centre structures.

Rittal together – Complete IT competence

Build on the competence of the market leader, and talk to our specialists. They are sure to find the perfect solution to meet your requirements. Experience a new dimension in IT efficiency.

Queries and information

Telephone hotline +49(0)2772 505-9099, Fax hotline +49(0)2772 505-72927, e-mail rittal-together@rittal.de

We will be happy to send you further information or advise you in person.

Please send me the following brochure(s):

❑ IT Catalogue

❑ IT News

❑ IT Cooling Solutions

❑ RimatriX5 – IT Infrastructure Solutions

❑ Rittal Catalogue 32

❑ Lampertz Catalogue 2008

❑ Litcos – More Security

From:

_____
Surname / first name

_____
Company / customer no.

_____
Department / function

_____
Address

_____

_____
Telephone

_____
E-mail

03/08 · E581

Switch to perfection **RITTAL** ®