

MINKELS

MAGAZINE

2018
#2

Minkels celebrates 70th anniversary

Should the digital world come to a halt,
so would our daily lives.

Future-proof your data centre!

Minkels offers comtrance GmbH complete
and modular solution.

The EN 50600 as a guide for the approach
of energy-efficiency in a data centre.



Strategic growth and collaboration
with Interxion.



Plieger opts for IT continuity
and optimum availability.



IBAAarau – renamed Eniwa in 2018 -
upgrades data centre services.



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latest developments in the
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COLOPHON

Minkels is a knowledge-driven producer and worldwide supplier of high-quality solutions for data centre infrastructure. Minkels is part of the brand portfolio of Legrand, a publicly traded company (NYSE Euronext Paris: LR) with worldwide sales in the low voltage installation, data network and data centre markets. Legrand operates in more than 180 countries and achieved worldwide revenues of 5 billion euros.

Minkels' products stand out for their innovativeness and flexibility. Customers can always be assured of getting the very latest data centre technology, modular solutions that respond to evolving, customer-specific business requirements.

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LEGRAND DATA CENTER SOLUTIONS PRESENT AT INTERNATIONAL EVENTS



The past few months were all about Legrand Data Center Solutions. Minkels, Legrand and Raritan showed their expertise and joint portfolio during various exhibitions. The Legrand Data Center Solutions team was present at international events such as Datacloud Monaco, Com-Ex Switzerland, Datacloud Africa, Data Centre World Frankfurt, DCD London, Data Centre World Paris and IT Room Infra 's-Hertogenbosch, The Netherlands.

Here's a quick visual recap of our participation in Marrakech for Datacloud Africa – the first ever forum in Africa on investing, powering, connecting, and deploying data centres across the continent.

Keep an eye on our event calendar for the 2019 events www.minkels.com/events ■



EXPANDING THE MINKELS' FACTORY!

Minkels is expanding its factory in Veghel, the Netherlands! But what is happening right now?

- The factory is expanded with 3000 m²
- A complete, full automated powder coating line is being in-housed
- Automation and one-piece-flow processes are being implemented

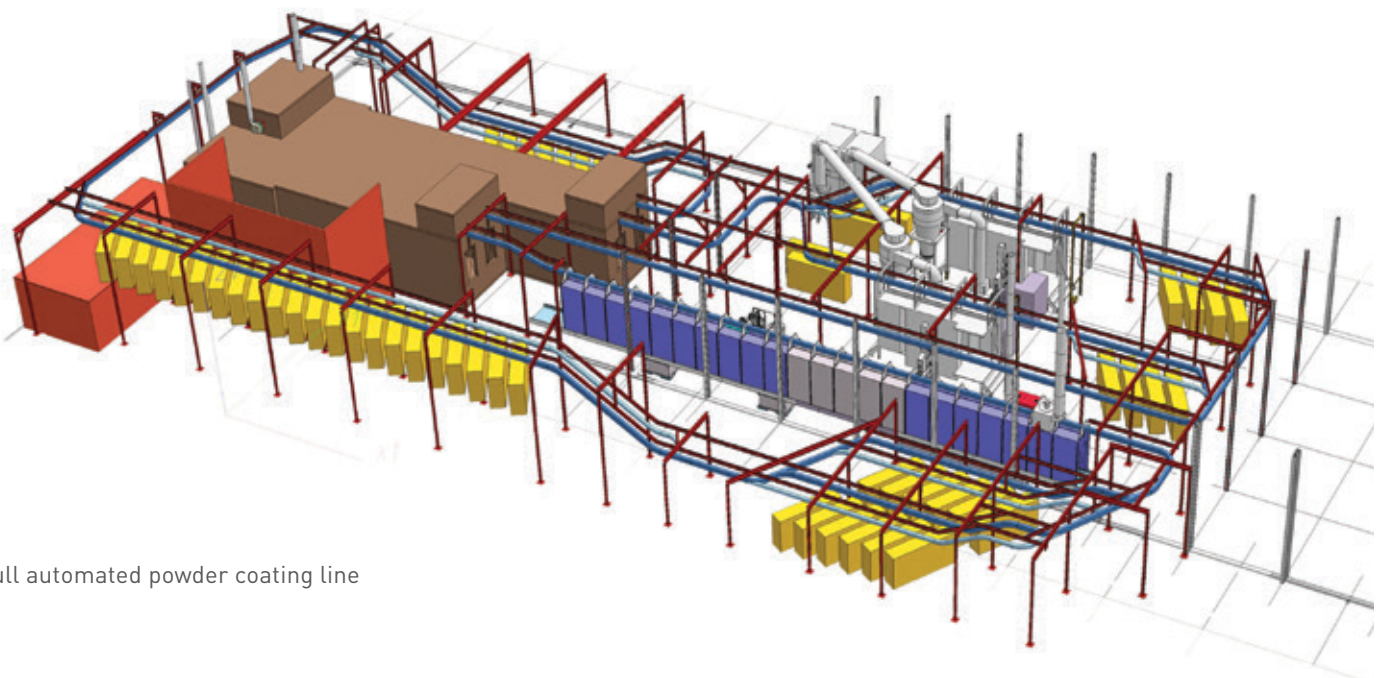
BETTER AND FASTER

The new factory will help provide a better and faster response (response time improvement of 30%) to rapid changes in demand from customers, who are looking for greater availability, diversity, flexibility and service. The lead time for producing and processing parts for racks and containment is also being reduced from 18 to 5 days.

"The expansion is going according to plan. We expect to be operational in March 2019," says Derk Jan Buter, Manager Operations at Minkels. "With these improvements, we will be ready for the future!" ■

RESULTS

- Response time improvement of 30%
- Lead time reduction for racks and containment from 18 to 5 days
- New powder coating line for optimal coating



Full automated powder coating line

A brief overview of seven decades of Minkels

On the 23rd of September, Minkels celebrated its 70th anniversary. A lot has happened in those years! In this edition of Minkels Magazine, Christiaan van Terheijden (CEO of Minkels) will give you a brief overview of these seven decades!



Christiaan van Terheijden,
CEO of Minkels

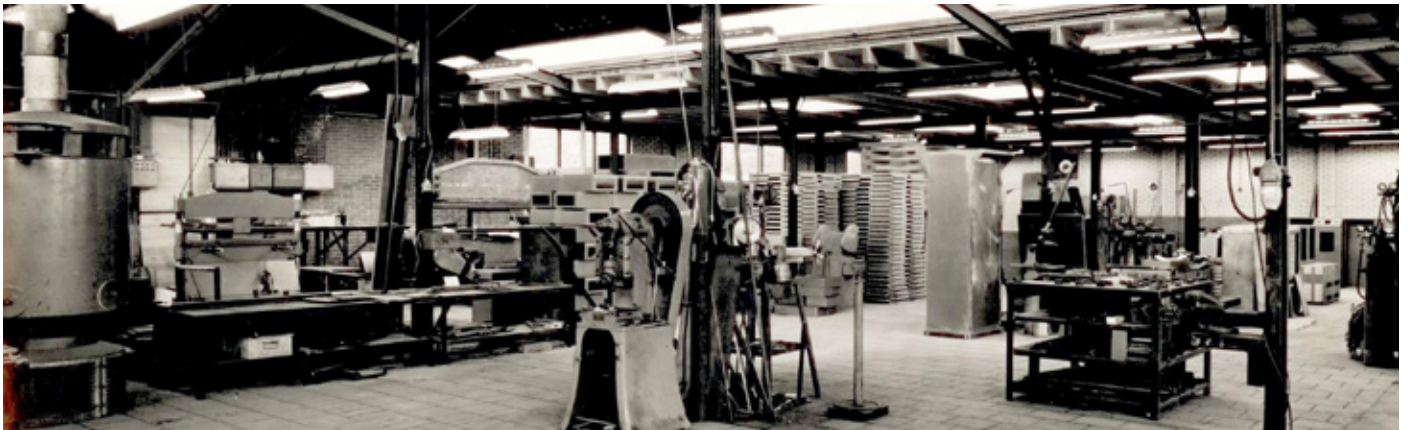
FROM LOCAL TO EUROPEAN SCALE

Minkels was founded in 1948 by the late Jan Minkels (+1982). Van Terheijden: “Until the late sixties, Minkels mainly supplied metal products for the locally based food industry. Minkels then developed a modular cabinet concept for Philips, for equipment with varying dimensions. Under the brand name Varicon, the cabinet concept was then also supplied to parties on a European scale, such as IBM, Hewlett-Packard and Digital.”

TOTAL SOLUTIONS

In the new millennium, Minkels started to broaden the portfolio in the direction of total solutions for data centres. “Minkels began to supply enclosures and cooling and monitoring solutions. An important milestone was the launch of the Minkels corridor system in 2006, which separates cold and hot air in the data centre. The year 2012 is also worth mentioning: it is the year that Minkels became part of the Legrand Group. Ever since then, Minkels has been the data centre infrastructure specialist in the Legrand Group. Legrand

1975



recognises that the vertical data centre is a growing, dynamic and high potential market. New developments – like IoT, Artificial Intelligence, Big Data, Smart City and Smart Factory – are continuously on the rise and ask for an innovative approach.”

NEW APPROACH

This new approach was the creation of Legrand Data Center Solutions teams in 2017. “Minkels, Raritan and Legrand wanted to speed up the market introduction of the Group’s integrated offering and thereby better serve customers and partners. That is why Minkels, Raritan and Legrand specialists are now working together in Legrand Data Center Solutions specialist teams – offering all data centre products: from UPSes to PDUs. Thanks to the Legrand infrastructure, we have now become a global player instead of a European player. We can

follow our global key accounts all around the world and deliver our products worldwide.”

GROWTH STRATEGY

Minkels’ growth strategy also asked for a greater production capacity. “We have built production locations inside factories of Legrand: on the east and west coast of the US and in China. We are planning to do the same in Singapore. With that, we have a global availability of our products: the same product, price, delivery time and service in New York, Shanghai or Amsterdam. We are also preparing the official opening of our new factory in Veghel, the Netherlands. We are not only extending the factory, we are also in-housing a full automated powder coating line and implementing automation and one-piece-flow processes. This will help to provide a better response to rapid changes in demand from customers, who

are looking for greater availability, diversity, flexibility and service.”

NEW RACK PLATFORM

Finally, in keeping with its innovation tradition, Minkels is introducing a new, worldwide, premium rack platform next year. All with the aim of meeting growing market needs. “If you look at data centres today, there are four main drivers: energy-efficiency, flexibility (or modularity), security and business continuity. Our new rack portfolio will be completely based on these drivers. For example, the platform makes it easier for data centre owners and designers to achieve energy reduction targets. With our portfolio, we are aiming at the top of the market: customers who are looking for high-end products.” ■



1948



1957



1959



1962



1979



1985

Strategic growth and collaboration with Interxion

Interxion offers companies – from large to small – space in its data centres. In addition, the co-location provider ensures a good environment: from cooling to power. Minkels solutions are a solid addition to the services of Interxion, according to Franklin Hendriks, Senior Customer Implementation Manager (Solution Design & Implementation) at Interxion.

FOOTPRINT IN EUROPE

Interxion is a Dutch-based colocation provider with a large footprint in Europe. Hendriks: “We have twenty years of experience and we operate about fifty state-of-the-art data centres in Europe. From Copenhagen to Paris. Thanks to our consistent designs, our customers can scale up easily within Europe. That focus on one continent – and not on the whole world – is very consciously chosen. That

way, we can create extra flexibility and work faster than with a global approach.”

INTERCONNECTION AND COLOCATION SERVICES

Interxion mainly supplies its customers with interconnection and colocation services. “We offer space to more than 700 connectivity providers. In addition, we offer our customers a wide range of space options – from a few racks to a complete

data centre – to meet their needs in terms of scale and security. This approach is paying off; we are seeing increasing demand – even from the US and Asia. These often large cloud providers choose us specifically because of our strategic locations and our connectivity options.”

MOST IMPORTANT LOCATION

Frankfurt is currently the most important location for Interxion. “This is the fastest growing region for all data centres because it has the highest density of connectivity. We ourselves have 14 data centres in Frankfurt. Marseille is also an important location; all sea cables enter Marseille. Our data centres are gateways to emerging markets and landing sites for important continental submarine cables. We can easily extend the reach of our customers to new domestic, regional and international markets.”

STRATEGIC COLLABORATION

Interxion focuses on strategic growth and collaboration with its customers. “If a customer, for example, has space in both the Netherlands and in Germany, we set up the same solution in both countries –





INTERXION FACTS

- 50 data centres
- 13 cities
- 11 countries
- 2000+ customers
- 24/7 support
- 99,999% uptime

creating a comparable look & feel. Standardisation helps us tremendously with our growth, just like a more efficient way of dealing with our quantity of suppliers. We now have three preferred suppliers, including Minkels. Minkels products are very solid and customers also see that. We often receive requests from customers themselves to work with Minkels racks. We are also very pleased with the aisle containment from Minkels. This is a good quality product with good support. For us, aisle containment is of vital importance. The aisle has to function properly, otherwise this will affect our service levels, with which, for example, we guarantee a certain temperature or humidity.”

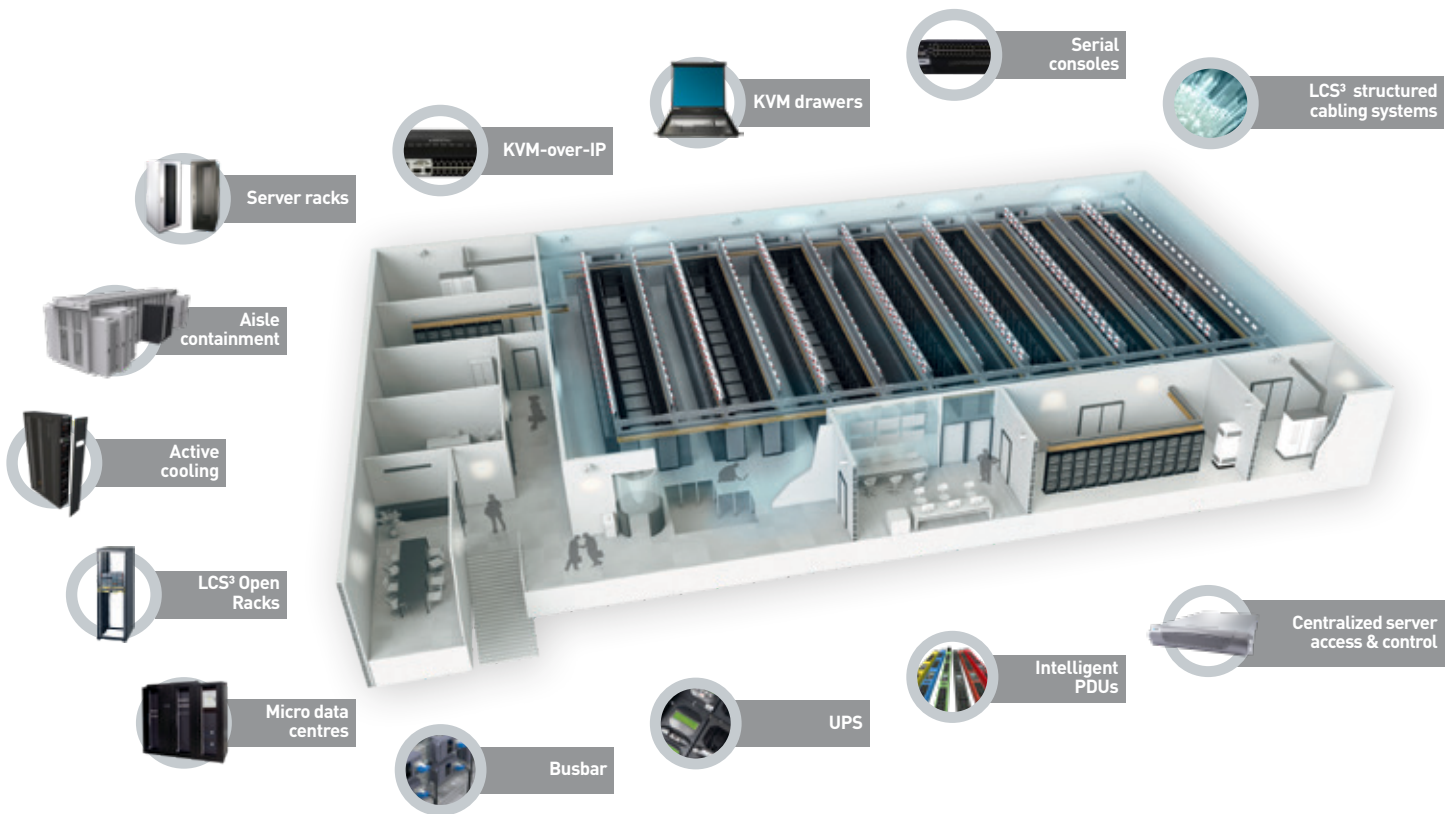
STANDARDISATION

Thanks to intensive collaboration, Interxion and Minkels can deliver consistent, unambiguous and easily implemented solutions throughout Europe. “Whenever possible, we strive for standardisation. This provides clarity for our customers, but also facilitates our internal communication. Thanks to a customer-specific catalogue, everyone knows exactly which Minkels products we can use. We have opted for standardisation according to the 80-20 rule; 80% standard and 20% flexibility.”

DIFFERENT DATA CENTRES

Interxion also needs this flexibility because their data centres are set up in very different locations. “If we need extra space in Amsterdam, for example, we might build a completely new data centre. But we also create data centres in existing buildings with historical value. For example, in Marseille we operate from a submarine dock from the Second World War – cultural heritage. We have maintained the shell and managed to set up a high-tech data centre inside. In Stockholm, we are in a similar situation; operating from an old building of a newspaper printing company. The company is still there, but printing presses are regularly removed. When that’s the case, we buy or lease such a hall and add extra capacity to our data centre. These kinds of projects require a special approach – amazing projects in a challenging environment”, Hendriks concludes. ■

Reliable, efficient and scalable data centre infrastructures is what we create!



YOUR BENEFITS

- One single point of contact with years' worth of knowledge
- Advice from specialists with specific expertise and a tailored innovative product portfolio for your complete data centre request!
- Scale according to your business requirements
- Get the maximum from your existing and future IT equipment
- Enhance your data centre reliability

GLOBAL EXPERTISE

Legrand Data Center Solutions offers you the global expertise of its specialist brands: Legrand, Minkels and Raritan. The comprehensive and innovative range of products deals with every aspect of the data centre; from the cabling systems of Legrand to the data centre infrastructure of Minkels and the data centre power management solutions of Raritan.

KEY CONCEPTS

The key concepts of modularity, flexibility and energy-efficiency have been implemented throughout the extensive and sustainable Legrand Data Center

Data centre projects are becoming more and more complex due to increasing globalisation. The support of a knowledgeable, reliable partner is essential during these projects: it is the real key to success!

INTERNATIONAL PRESENCE OF LEGRAND

ESTABLISHED IN OVER **90** COUNTRIES

SALES IN CLOSE TO **180** COUNTRIES

4.9% OF TURNOVER INVESTED IN RESEARCH & DEVELOPMENT

OUR SPECIALIST BRANDS

legrand®

Legrand solutions for the white space currently provide high-quality connectivity to more than 200 million devices. The Legrand Group is a world leader in communication networks for data transmission. Its investment in the development and design of structured cabling systems and solutions has enabled it to expand its offer and achieve the highest level of performance.

MINKELS

Minkels is a knowledge-driven producer and worldwide supplier of high quality solutions for data centre infrastructure. Minkels' products stand out for their innovativeness and flexibility. Customers can always be assured of getting the very latest data centre technology, modular solutions that respond to evolving, customer-specific business requirements.

Raritan®

Raritan offers data centre power management solutions that include intelligent PDUs, transfer switches, environmental rack controllers and sensors as well as serial console servers and KVM-over-IP switches. In over 76 countries and 60,000 locations worldwide, Raritan's award-winning hardware solutions increase energy efficiency, improve reliability, and raise productivity.

Solutions product portfolio. This ensures that you always benefit from the latest data centre technologies: modular solutions that are fully adapted to the individual and ever-changing needs of the data centre infrastructure. Specialised Legrand Data Center Solutions teams will help you set up your data centre project, from its design through to the final implementation.

APPROACH

The approach of the Legrand Data Center Solutions teams is to fully understand

your requirements and business drivers. The teams will constructively challenge and align it. In-depth market and product knowledge as well as a strong link with standard committees and the consultant world further help to get the best results for your data centre. Our specialists also share knowledge during events and in different white papers and specification documents. These knowledge documents – available on our specialist websites – can be used as a guide to create future-proof and energy-efficient data centres.

CONTINUE READING

More information about Legrand and its specialist brands can be found in several documents which can be downloaded from the websites www.legrand.com, www.minkels.com and www.raritan.com.

For more information about Legrand Data Center Solutions, see the brochure 'Data center solutions for the white space' on our website: www.minkels.com/downloads ■

Plieger opts for IT continuity and optimum availability



Plieger has its origins in the metal trade, dating back a hundred years. In those years, the company has grown into a national wholesaler of sanitary and climate products. Plieger now has 750 employees, 61 branches including three distribution centres – with a fourth in development. Minkels Magazine spoke with Plieger and All IT Rooms about the IT challenges that Plieger was facing.

FROM AMUSEMENT PARKS TO RESIDENTIAL TOWERS

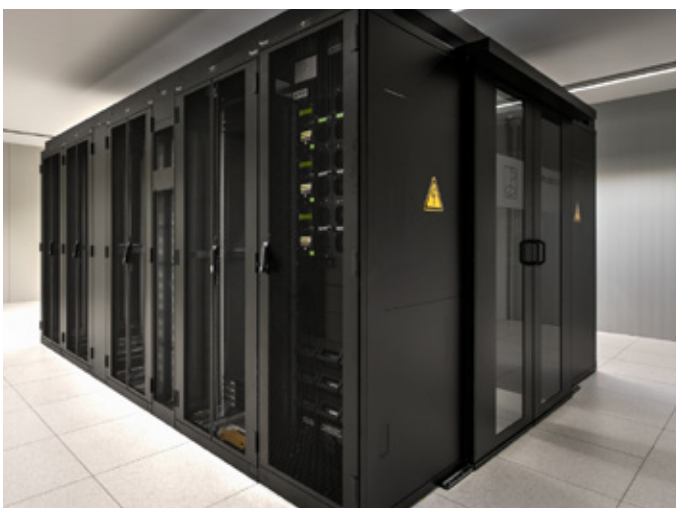
With its own expedition, Plieger supplies a range of more than 150,000 articles – of which

60,000 in stock – to installers, plumbing companies, retailers and hardware stores, among others. “We work for very diverse customers. They differ from local freelancers to large national

project organisations”, says John van Schaijk (Corporate IT Manager Plieger). “Our products can be found everywhere. In homes, hotels, but also in amusement parks and residential towers.”



Photos: Paul Kampman



CLOSE TO CUSTOMERS

Plieger wants to be close to her customers. “That is why we chose to roll out Express locations. If customers order a product and it is in stock, they receive it the same day. If a product is not in stock, it will be delivered at an Express location of their choice the next day. This way, we make life easier for our customers; they can even order via WhatsApp. And, of course, we have our webshop, because e-commerce is also becoming increasingly important to us.”

DIGITAL ENVIRONMENT

An environment that is becoming increasingly digital asks for a professional IT space. Maarten Post van der Molen (System Manager Plieger) explains: “At our head ▶



office in Zaltbommel (the Netherlands), we have a well-functioning IT space, filled with Minkels products. When we wanted to increase our availability, we decided to realise a second data centre nearby; in Den Bosch. We wanted to create a similar data centre as the one in Zaltbommel – an integrated solution with redundant climate and power facilities.” Plieger got in touch with All IT Rooms; specialist in designing, building and managing data centres and server rooms. “But All IT Rooms did more than just elaborate on the concept in Zaltbommel. They have

mapped our wishes and analysed whether we were asking the right questions”, says Van Schaijk.

COOLING WITH 21 DEGREES CELSIUS

All IT Rooms had a number of recommendations for the new IT space, including in the area of cooling. Ronald Kok (director of All IT Rooms): “For Plieger, modularity and expandability were particularly important. The cooling system that Plieger ultimately opted for – row-based cooling (Varicondition) – meets these requirements; you easily add

extra cooling and thus easily expand the cooling capacity. To expedite this process, we have already placed dummy units that are easily replaced by the Varicondition row cooling. In addition, with this system it is not necessary to cool the entire data centre; you use less air and are closer to the equipment because the racks and cooling units are housed in a cold corridor layout; that works much more efficiently. This allows you to cool with relatively high temperatures, which means that the energy consumption is drastically reduced. The air that goes



into it is 21 degrees Celsius. With those temperatures outside everyone would wear shorts – so it's not really 'cooling' anymore!"

READY TO BE USED

Meanwhile, the IT space is ready to be taken in use. Jamy de Jonge (Account Manager Minkels): "The room is fully equipped with the products of Legrand Data Center Solutions. From the racks of Minkels to the UPSes of Legrand." Plieger is very pleased with the chosen products and the cooperation with All IT

Rooms and Minkels. Van Schaijk: "From the beginning, we had the same goals in mind and we gave each other space and helped one another. We were really taken care of during the whole process; a total concept has been put in place by knowledgeable partners who cooperated in a pleasant way – with us and with each other. We could rely on them – from project management to the delivery protocol – while we focused on our own core business. And now we can rely on the continuity of our IT." ■

Should the digital world come to a halt, so would our daily lives

The Internet has revolutionised the world we live in. By going online you connect to a worldwide infrastructure that enables you to collect, connect, gather, process, analyse and monitor all that is happening around us. Having access to that data when you need it is crucial. “When the digital world comes to a halt, so will our daily lives”, says Stijn Grove, Managing Director of the Dutch Data Center Association.

A LIFE WITHOUT INTERNET

A life without the internet has become unimaginable. Grove: “Both on a work-related and a private level, we are constantly exchanging information by means of the digital ecosystem. In today’s digital world, it has become the norm to always be ‘on’. A malfunction in this ecosystem would cause many people to feel uncomfortable to say the least.”

FOUNDATION OF OUR DIGITAL LIVES

“For the last 20+ years, the online world has been provided by data centres, which are the foundation of our digital lives and our digital economy”, says Grove. “All digital data is transported through networks and stored and processed in data centres. These highly secured buildings with redundant power supplies are designed to ensure continuous



Stijn Grove, Managing Director of the Dutch Data Center Association.



Minkels is the Main Partner of the Dutch Datacenter Association (DDA) - the branch organisation of data centres in the Netherlands. The DDA actively cooperates with market parties, government and other interest groups. As a Main Partner of the DDA, Minkels wants to contribute to the further professionalisation of the Dutch data centre market and the transfer of (international) data centre knowledge.

operations of hardware. Cooling is provided to maintain an ideal server temperature, filters are installed to ensure clean, dust-free air and sensors indicate even the smallest changes in the environment. All hardware, and the equipment that facilitates it, rely on the continuous supply of power through the use of redundant, separate systems.”

DATA CENTRES ARE CRUCIAL

Data centres are a crucial part of the continuous delivery of internet services. “That is why they are designed with a very low risk of downtime; the risk is basically reduced to zero. A percentage of 99.9% ‘uptime guarantee’ is the industry standard. Data centres have black-out tests, back-up storage

batteries and redundant cabling. All is focused on continuous access to digital services and data.”

SMOOTH RUNNING OF THE DIGITAL ECONOMY

The digital infrastructure, with cloud, connectivity and data centres, is a vital part of the online world on which we now depend more and more. “It is the base of our new society and economy. The digital infrastructure is composed of data, networks, the data centres and the cloud & hosting sectors. Digital services are created, delivered and then consumed by businesses, governments and citizens. All these interactions between IT infrastructure, software, devices, sensors and cabling, are crucial

for the smooth running of the digital economy.”

FOCUS AREAS

To ensure continuous delivery, collaboration is the only way forward, according to Grove. “Educating new technical talent, strengthening the energy infrastructure and capacity, accelerating the reuse of waste heat and stimulating sustainability are the most important focus areas for the coming year(s). We are more than happy to continue exchanging knowledge and setting up partnerships in order to raise the representation of our sector, grow the Dutch ecosystem to make the digital sector even more prosperous and sustainable.” ■

CONTINUE READING

The Dutch Data Center Association presents the “State of the Dutch Data Centers 2018 – Always On” report. The survey reflects the growth and developments that have taken place in the Dutch data centre sector over the past 12 months. Download the report at www.dutchdatacenters.nl/en/publications/state-the-dutch-data-centers-2018/.

Let's dive into the world of cable management

Structured cabling is important for the reliability and optimum performance of your data centre or server room. Flexibility and accessibility – for trouble-shooting or during expansions – are essential as well, according to Vincent Liebe (Marketing Manager) of Minkels. Let's dive into the world of cable management!



What are the benefits of proper cable management?

Proper cable management is essential for the availability of services. With good cable management, cables are not exposed to mechanical stress, they do not disrupt the airflow and the cables are neatly routed. This reduces the chance of errors during changes or trouble-shooting. The arrival of the new generation copper and fibre optic network cabling (for example CAT 8) further reinforces the importance of good cable management. With data transmission speeds increasing, the proper management of cable bundles can have a direct influence on this. In addition, our customers want to invest sustainably and retain the freedom to easily implement future changes in the infrastructure. This certainly includes the further implementation of fibre in data centre networks.”

What developments do you see in the field of cable management?

“Our customers increasingly want to install network infrastructure via the top of the racks. This means that copper and fibre glass cabling – via cable support systems above the racks – is inserted in the racks. Distribution of networks via raised floors occur less and less. The reason for this is of course the manageability of Move, Add & Changes (MAC). Things such as order and neatness play a major role in this. This of course makes the maintenance of networks much easier. In addition,



the density of the network infrastructure increases to be able to continue handling the increased data transmission. The amount of annual global data centre traffic in 2016 was estimated to be 6.8 ZB and by 2021 will triple to reach 20.6 ZB per year. This increase represents a 25 percent CAGR (source: Cisco Global Cloud Index: Forecast and Methodology, 2016–2021). More physical network cables in a rack means a greater need for efficient management.”

How do you ensure sustainable cable management?

“The ever-increasing demand for capacity and the need for short response times requires the flexible building of networks. We also see that there is a need for sufficient freedom in the standardisation of high-speed connections. An example of this is the use of MTP connectors for 40 and 100 Gbit/s optical fibre connections. The MTP connector can be used as an interconnection to traditional

cassettes with fan-out to, for example, LC connectors or in the future this type of connector can be inserted directly to compatible equipment. It is important that cable management in racks efficiently supports this kind of possible shifts. This not only concerns the initial investment, but also future costs for implementing changes. Legrand provides a full range of sustainable network cabling solutions with the LCS³ cabling platform.”

What is Minkels’ design philosophy towards cable management?

“We aim for a portfolio that can be easily and intuitively applied by our customers. For example, we opt for so-called ‘toolless mount’ installations as much as possible. Customers can then move and add accessories quickly and flexibly – without the use of tools. For this, we work closely with our customers to create a package that is as practical as possible. Of course, we see that our customers deal with network designs and topology in different ways. The trick for us is to apply our products as universally as possible.”

What do you strive for in cable management?

“When we look at cable management systems, we distinguish a number of ➤



Vincent Liebe, Marketing Manager at Minkels



Vertical in 19-inch plane



Vertical in the rack



Vertical in 19-inch plane



Front-to-back cabling

sub-areas. **Horizontally** (everything that takes place around the patch panels), **vertically** (cable management of fixed infra from the room into the rack), from **cabinet to cabinet** (connections between cabinets) and from **corridor to corridor** (connections between cabinet rows and / or corridors). We strive for non-ambiguity and coherence for all these areas. The use of cable management accessories must be intuitive and simple. In addition, we want to solve certain basic principles – such as the bending radius compensation – in all areas in the same way. Of course, Minkels offers solutions for all these challenges.”

What are your considerations in the area of sustainability?

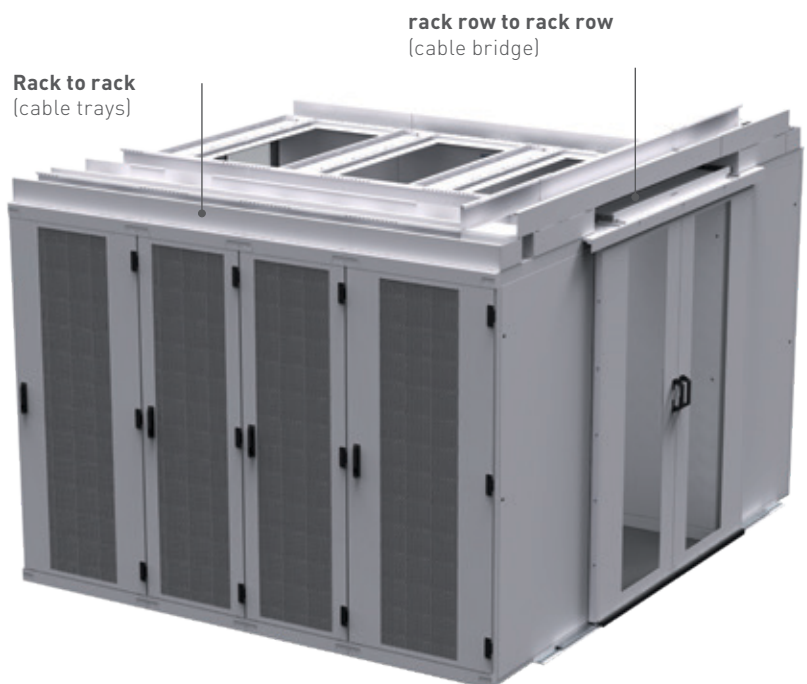
“Legrand and Minkels are very committed to sustainability. This means that we have a keen eye for material use, production processes and design rules to support product development responsibly. We look at the environmental impact of the raw materials, but also at the behaviour of products and materials under special circumstances – such as fire. Our

engineers strive for an optimum between applicability and sustainability; this is in our DNA.”

What can the customer expect from Minkels in the near future?

“Next year, our customers can expect a range of new products and solutions. The

development of our portfolio provides an even better connection to the needs of the customer and offers the answer to cable management, airflow management and security challenges.” ■





3 Dimensions of Excellence

- Performance
- Scalability
- Efficiency



From control and connection interfaces to cable management, energy distribution and data distribution systems, Legrand provides a variety of solutions designed to manage lighting, energy, networks and building access. Legrand's complete global solutions for data communication perfectly address the key challenges for digital networks: performance, scalability and efficiency.

4 KEY AREAS OF EXPERTISE

- Digital infrastructure
- Control and command
- Cable management
- Energy distribution



Legrand Group

A leading company
for all your IT networks

Legrand is the global specialist in electrical and digital building infrastructures. The Group offers a comprehensive range of solutions and services tailored to residential, commercial and industrial applications. The scope of its offering and its leading positions make Legrand a worldwide benchmark.



IBAarau – renamed Eniwa in 2018 - upgrades data centre services

When they built their new data centres Eniwa opted for Minkels AG engineering

Eniwa built their own data centre with two server rooms at their new head office. It means that they can keep their data in-house. They are also planning housing and cloud services for clients. To successfully implement the hot corridor strategy, Eniwa worked with Minkels AG from Switzerland.



NEW DATA CENTRE

Urban energy supplier 'Industrielle Betriebe Arau' (IBAarau) is now called 'Eniwa'. Eniwa is an innovative, regional full-service provider for energy supplies, mobility, telecoms and electrical installations. The new data centre, designed to provide redundancy, satisfies the toughest security requirements. It has enough space to offer other companies a full-service package – from housing through to running external IT infrastructures in a Swiss cloud.

SEVERAL OBJECTIVES

Eniwa spent around a year orienting themselves before Minkels were finally awarded the contract to plan, develop, build and install the data centre infrastructure. Head of IT Beat Wyss had several objectives: to improve security – Including providing protection against physical threats – to reduce energy consumption; to be able to expand the offer to other companies; and to align the system with the building's FTTO (Fiber-to-the-Office) cabling.

KNOW-HOW, REFERENCES, AND COST-BENEFITS RATIO

Eniwa was looking for a partner that would be able to implement the required 'hot corridor' strategy and



Beat Wyss, IT-manager at Eniwa

Rolf Büeler, Manager Technology, Operations & Service at Eniwa

build racks that would make the most of the ceiling height. They also required the flexibility to add components to existing racks. The provider Eniwa was looking for was to be responsible for managing the project and be the on-site interface to the construction managers. Minkels impressed Eniwa with their know-how, references, and cost-benefits ratio. It was also a plus that Minkels, being a partner of fibre glass specialist Connect Com AG, had equipped the building services rooms earlier on with custom-built cabinets and was very familiar with the site's characteristics and the FTTO strategy that was already in place.

DATA CENTRE ACCORDING TO CUSTOMER NEEDS

The server rooms in the new operations building were designed specifically for Eniwa. The two parties worked together to develop the best solutions. The hot aisle containment with the racks makes use of the ceiling height, while the cabling comes from above and connects all the building's IT users in compliance with FTTO principles. The decision to go with Minkels was taken in spring 2017, and the data centres went live six months later. Beat Wyss is happy that he chose the right partner. He says, "We more ▶

ABOUT ENIWA AG

Eniwa is a regional energy service company with headquarters in Buchs AG. Eniwa offers a wide range of supply and installation services that provide the region – around 30 municipalities – with long-term security of supply and added value. The range includes electricity, natural gas / biogas, heating / cooling, hydrogen, water, telecommunications, energy services and electrical installations.

www.eniwa.ch



than achieved our objective. The Minkels partnership worked extremely well. I was able to totally rely on the building work going according to plan, and I got exactly the data centre that I wanted. Working together to achieve the objectives, plus open communication – that’s how a project should be!”

WORKING AUTONOMOUSLY FOR SEVEN DAYS

The security and high availability of the redundant infrastructure tell a tale: the building is earthquake-proof, and it has its own emergency power, photovoltaic system, rainwater harvesting system and heating system so that it can be cut off from the outside world for up to

seven days. The single mode fibre glass cabling is secure, efficient, scalable and ready for future bandwidths and network protocols. It also consumes up to 70% less energy than copper networks, which is environmentally friendly and economical. At the moment, Eniwa is only using 20% of the available infrastructure. Wyss is already in touch with companies who are interested in outsourcing all their IT, or parts of it, to Eniwa AG. One change is going to be made: sectioned rack doors would be better for clients who require less server room space. Thanks to the modular system, altering components to meet new requirements is no problem for Minkels. ■

Raritan®

A brand of **L1 legrand**

THE MOST ADVANCED PDU EVER BUILT

The latest PX intelligent PDU controller, the iX7™ brings PX3 models even more compute power, and additional ports and applications to help you manage your data center operation more efficiently and at lower costs.

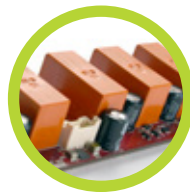
Integrated in existing PX3 intelligent PDU models at no extra costs, the iX7 controller will ensure more reliability to your network and connectivity, a whole new level in access control capabilities, along with a future-proof design architecture built to last.



**BUILT-IN FAILOVER
POWER**



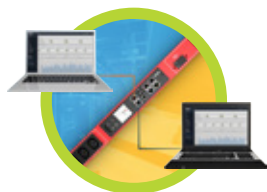
**CIRCUIT BREAKER
TRIP ALARMING**



**ENERGY EFFICIENT
LATCHING RELAYS**



**REMOTE POWER
CONTROL / OUTLET
LEVEL POWER
MANAGEMENT**



**DUAL NETWORK
ACCESS**



**RESIDUAL CURRENT
MONITORING OPTION**

DISCOVER MORE AT RARITAN.COM/IX7-CONTROLLER





Future-proof your data centre!

The role of data centres is quickly changing, driven by the cloud, data growth and IT cost reduction. This leads to new challenges when it comes to future-proofing data centre infrastructures. Minkels believes that modularity and full integration are the key to meeting these challenges. Only then can the right amount of flexibility and efficiency be offered. Minkels' experts have published a number of white papers which can be used as a guide to creating a future-proof and energy-efficient data centre.

But what are these white papers about?

WHITE PAPER 10 (NEW)

More and more data centre owners and ICT managers use the EN 50600 for effectively setting up data centres and server rooms. The standard not only provides insight into the design process – from strategy determination to operation – but also into KPIs, best practices and data centre operations. But how do you use the EN 50600 to design an energy-efficient data centre? White paper 10 offers some insights! Read more about this white paper on page 30.

WHITE PAPER 9

This white paper on micro data centres describes the micro data centre landscape

and the different stakeholders in further detail. Topics like business continuity, future needs, risks and how to integrate IT and facilities are discussed. Goal of the white paper is to guide the reader in the process: from forming a strategy up to the practical implementation.

WHITE PAPER 8

Aimed at further reducing data centre energy consumption and addressing corporate social responsibility (CSR) strategies, this Minkels White paper on ROI calculation for aisle containment infrastructure will help data centre operators and its users to evaluate the real value of aisle containment investments.

WHITE PAPER 7

Cold Corridors form the solution to a challenge that data centres have been presented with for many years: optimising the cooling and energy-efficiency through the optimal separation of hot and cold airflows. However, in the current data centre world optimisation of cooling and energy-efficiency are not the only challenges that data centre managers and owners face...

WHITE PAPER 6

Minkels' White paper 6 focuses on the thermal behaviour of a modular UPS in a Cold Corridor. This knowledge document discusses the necessary features to guarantee a reliable performing UPS.

CONTINUE READING

Minkels' experts have published a number of white papers which can be used as a guide to creating a future-proof and energy-efficient data centre:

- White paper 10 How to use the EN 50600 to design an energy-efficient data centre
- White paper 9 Micro data centres: from strategy to implementation
- White paper 8 Evaluate the return on investment (ROI) of aisle containment
- White paper 7 Cold Corridors for a new generation of data centres
- White paper 6 Thermal behaviour of a modular UPS in the Cold Corridor
- White paper 5 Integration of aisle containment with fire suppression systems
- White paper 4 Rack airflow optimisation
- White paper 3 Tips & Tricks for the professional use of PUE as a management tool
- White paper 2 New dimensions in data centre design
- White paper 1 Cooling solutions for data centres

Free copies of these white papers can be found at:

www.minkels.com/whitepaper

WHITE PAPER 5

Aisle containment and fire detection and suppression systems interact with each other in a way that is not always understood very well. A data centre might find itself confronted with disapproval by insurance companies and authorities having jurisdiction (AHJ's). This white paper shows how a well-integrated design between cooling and fire safety can be achieved.

WHITE PAPER 4

Today's data centres have become progressively more efficient. New insights and developments in the field of power electronics and cooling have driven down the energy consumption. Data centre owners with low PUE numbers need to be increasingly more creative to further improve the energy-efficiency. What methods can be employed to achieve this? This white paper shows that reinventing some of the most primary assets of the data centre, namely the rack and its 19" accessories, still pays off. White paper 4 is currently being updated. The release is planned for 2019.

WHITE PAPER 3

This white paper points out tips and tricks for the correct use of a PUE metric, in order to reach a certain level of operational excellence within your own data centre environment.

WHITE PAPER 2

Data centres have reached the state where it's crucial to further professionalise and take responsibility for its impact. The PUE has done a lot of good already but it is just a start... The next important definition that will help data centres further professionalise is Operational Excellence.

WHITE PAPER 1

This white paper explains different solutions for different power requirements and presents the basic considerations for data centre cooling. Methods for calculating cooling requirements are described as well as the way in which these requirements are used to select an appropriate cooling configuration. White paper 1 is currently being updated and is not available on our website right now.

Which white paper would you like to read? Go to www.minkels.com/whitepaper and request the white paper(s) of your choosing. ■



Minkels offers comtrance GmbH complete and modular solution

comtrance GmbH, a privately held German company, is a locally managed IT services provider in Düsseldorf with experience in the internet and hosting technology since 2001. comtrance has been maintaining their own data centre with around 400sqm of active data centre space in the Connecta Parc in Düsseldorf since 2008. comtrance is hosting customer projects fully under their own control. Minkels Magazine spoke to Thomas Czarnetzki (Owner comtrance) and Patrick Kambach (Senior Engineer IT Infrastructure at comtrance) about the challenges in the data centre market.

SECURITY, SECURITY, SECURITY

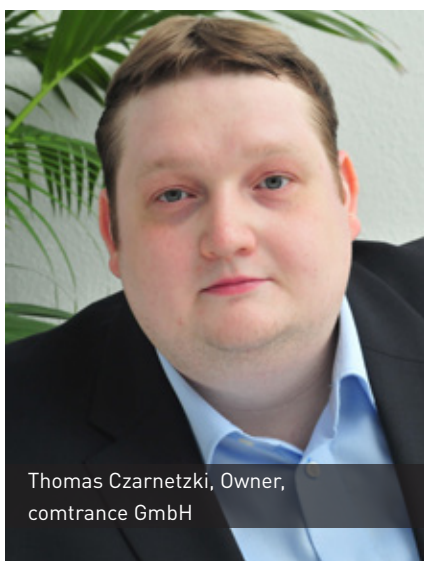
comtrance offers the customer anything from colocation to managed hosting, from high secure connectivity to premium support. Kambach: "Our customers get real added value since we are not only focusing on the colocation demand. We give them

what they really need; a customer-specific total solution. Great support also sets us apart; we offer a 24/7 hotline with a real technician on the other end, we did not opt for a call centre. We are competing with quite big players in the market, that is why we – as a smaller player – can act more flexible and faster.

Having our own, fully Germany-based data centre, is also a big plus for our German customers. These are mostly small and mid-sized B2B companies that have a real need for a very secure environment in a local data centre. Right now, the privacy regulation is becoming stricter and companies tend to choose us over companies that are based abroad. Especially since every company has to officially deal with the GDPR (General Data Protection Regulation) now. It's all about security, security, security. We have a strong vision on how to deal with the GDPR and we gladly share this vision with our customers."

MORE RACK SPACE

comtrance has a data centre of about 400sqm, 0,5 MW and a PUE of 1.5. "We have three main colocation rooms. We built the first one in 2008. So you can imagine that it was ready to be renewed. The second room was first used for low cost housing but is now set up with the colocation racks of Minkels. During



Thomas Czarnetzki, Owner,
comtrance GmbH



Patrick Kambach, Senior Engineer IT-
Infrastructure, comtrance GmbH



the quotation process Minkels was competing with our earlier supplier. Minkels provided us with a clear quotation that we received very fast. It took them only a couple of days while it took the competition several weeks. The Minkels quotation focused on our wishes, offering a complete solution. We could

actually see what the price was for all the different elements. This modular way of working really appealed to us. In the end, we chose Minkels since we got more rack space (higher and deeper racks) and more options within our budget. The set-up also matched the same standards as the first colocation room.”

STRONG AND SECURE RACKS

The customers also benefit from using Minkels racks. “We really have a competitive edge since we can offer our customers more space with our higher and deeper racks. The colocation racks, cold corridor and Raritan PDU’s also have a great look and feel. We chose the colour black and have our own logos custom made on the racks; it looks very professional and serves our customer binding. This totally matched with our own experience from the beginning on. We went to the Netherlands early in the sales process to check out the racks in the showroom and the factory . It was nice to see the production process and the outcome; strong, secure racks. No paper-thin doors but real solid doors. The implementation of the cold corridor also resulted in a lower air-conditioning consumption. We are very pleased with Minkels and hope to set up the third colocation room with Minkels products too.” ■

FACTS

- Data centre in Düsseldorf
- German data centre location following BDSG
- DIN ISO 9001:2015 (quality management) and DIN EN 27001:2013 (security) certified
- Uninterruptable Power Supply (UPS and Diesel Generator)
- Redundant HVAC
- 100% eco power from water plant
- Early fire detection apparatus
- 24 hours / 7 days video surveillance
- Access control with RFID-Chip and biometric hand scanner
- Antistatic raised floor
- Monitored by security service



THE EN 50600

for the approach of energy-efficiency

According to the EN 50600, three pillars together determine the quality of a data centre: energy-efficiency, availability and security. The standard provides guidelines for determining which level is desired in each area. White paper 10 “An energy-efficient data centre using the EN 50600” discusses the first pillar: energy-efficiency. This knowledge document will guide you through the different parts of the standard. Let’s have a closer look at energy-efficiency in combination with the EN 50600!

FRAMEWORK FOR DESIGNING AND OPERATING A DATA CENTRE

The EN 50600 provides a framework for designing and operating a data centre. The design is divided into five different sections: building construction, power distribution, environmental control, telecommunication cabling and security systems. In each of these sections, energy-efficiency goals can influence design choices.

DATA CENTRE DESIGN CHOICES

In part one of whitepaper 10, we review how the EN 50600 can help in making data centre design choices – to build and operate an energy-efficient data centre in accordance with the intended goals. This part of white paper 10 discusses strategies and objectives, business risk analysis and availability, resource efficiency and availability choices, the use of KPI’s when designing a data centre

and what different standards have to say about energy-efficiency.

ENERGY-EFFICIENCY ASPECTS OF DATA CENTRE COMPONENTS

Part two of white paper 10 deals with energy-efficiency aspects of all the components in the data centre and relates these to the recommended practices and other relevant parts in the EN 50600. We will roughly follow the sequence of the



AS A GUIDE in a data centre

consecutive parts of the EN 50600 and link the recommended practices. You will also find more details on the energy-efficiency properties of the corresponding Minkels, Legrand and Raritan products.

EUROPEAN AND COUNTRY SPECIFIC PROGRAMS

To stimulate the use of energy-efficient solutions in data centres, there are several authorities that run programs to reach this effect. In and outside of Europe, the 'EU Code of Conduct on Data Centre Energy Efficiency' and the best practices within this code, have been the reference for local programs. All

recommended practices from this program are in the 50600-99-1. It is outside the scope of this white paper to discuss all the existing programs, but in part three of this white paper we will look at the situation in the Netherlands and in the UK as an example.

REQUEST WHITE PAPER 10!

Are you interested in white paper 10? You can request it at www.minkels.com/whitepapers! ■

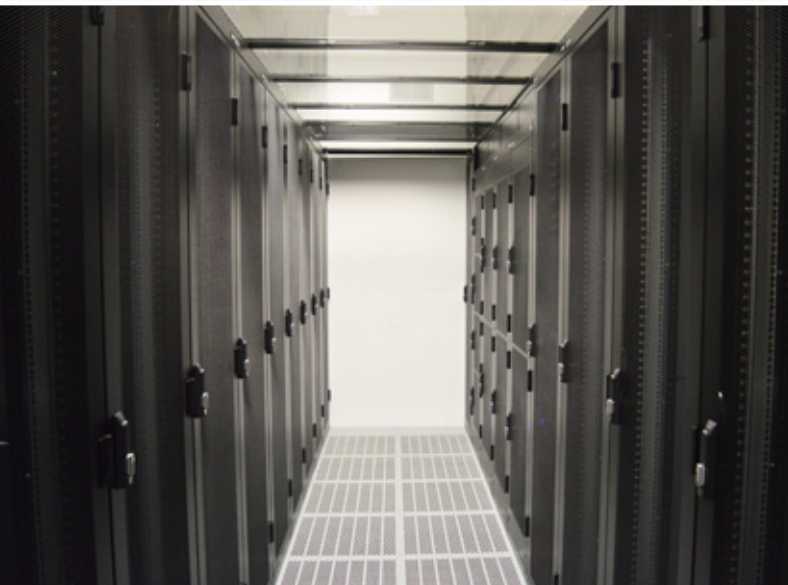
ABOUT WHITE PAPER 10

More and more data centre owners and ICT managers use the EN 50600 for effectively setting up data centres and server rooms. The standard not only provides insight into the design process – from strategy determination to operation – but also into KPIs, best practices and data centre operations. But how do you use the EN 50600 to design an energy-efficient data centre? Niek van der Pas – Lead Data Centre Expert at Minkels and the author of many Minkels' white papers – provides these insights in white paper 10!

Interxion



Plieger



Comtrance



Eniwa