



DATA CENTRE INTEGRATED SOLUTIONS



THE ANSWER TO SPECIFIC
DATA CENTRE REQUIREMENTS

Modular, integrated data centre solutions

The role of data centres is rapidly changing, in part driven by the cloud, data growth and IT cost reduction. Significantly more dynamic activities are taking place in the data centre environment. This presents new challenges when it comes to designing and future-proofing data centre infrastructure.

Building a data centre demands a high degree of flexibility and a modular approach in order to be able to adapt to the ever-changing needs in the market. Projects are also becoming more and more complex due to increasing globalisation. Support and assistance by a well-informed, trustworthy partner is essential. Legrand, together with data centre specialist Minkels, is able to provide worldwide expertise and an extensive range of sustainable and innovative data centre solutions.

The far-reaching partnership between Legrand and Minkels makes it easier and more cost effective for the customer to implement data centre infrastructure. There is a high level of synergy between the Legrand and Minkels products as they combine the 'best of both worlds'. While Minkels has integrated data centre solutions – including energy-efficient housing, cooling, monitoring and power distribution – Legrand is specialised in the proven technologies of building-dependent infrastructure (including switches and distribution equipment, cable management systems, LCS³ data networks, UPS systems and rail conduit systems).

MINKELS IS THE EXPERT FOR THE 'WHITE SPACE'

Minkels is a leading European manufacturer and global supplier of sustainable data centre solutions. The products stand out in terms of innovation and flexibility. Customers can always be sure that they have the latest data centre technologies at their disposal. Minkels offers modular solutions:

- Housing
- Cooling
- Monitoring
- Power & Connectivity



HOUSING



COOLING



MONITORING



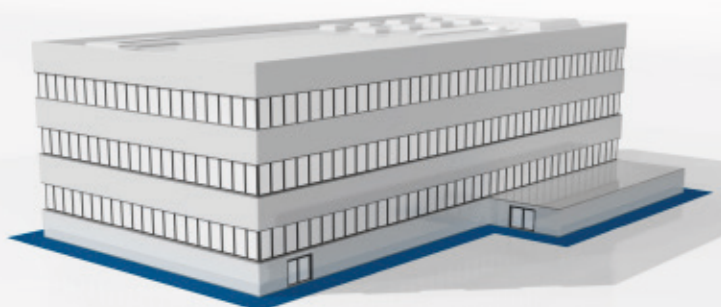
POWER & CONNECTIVITY



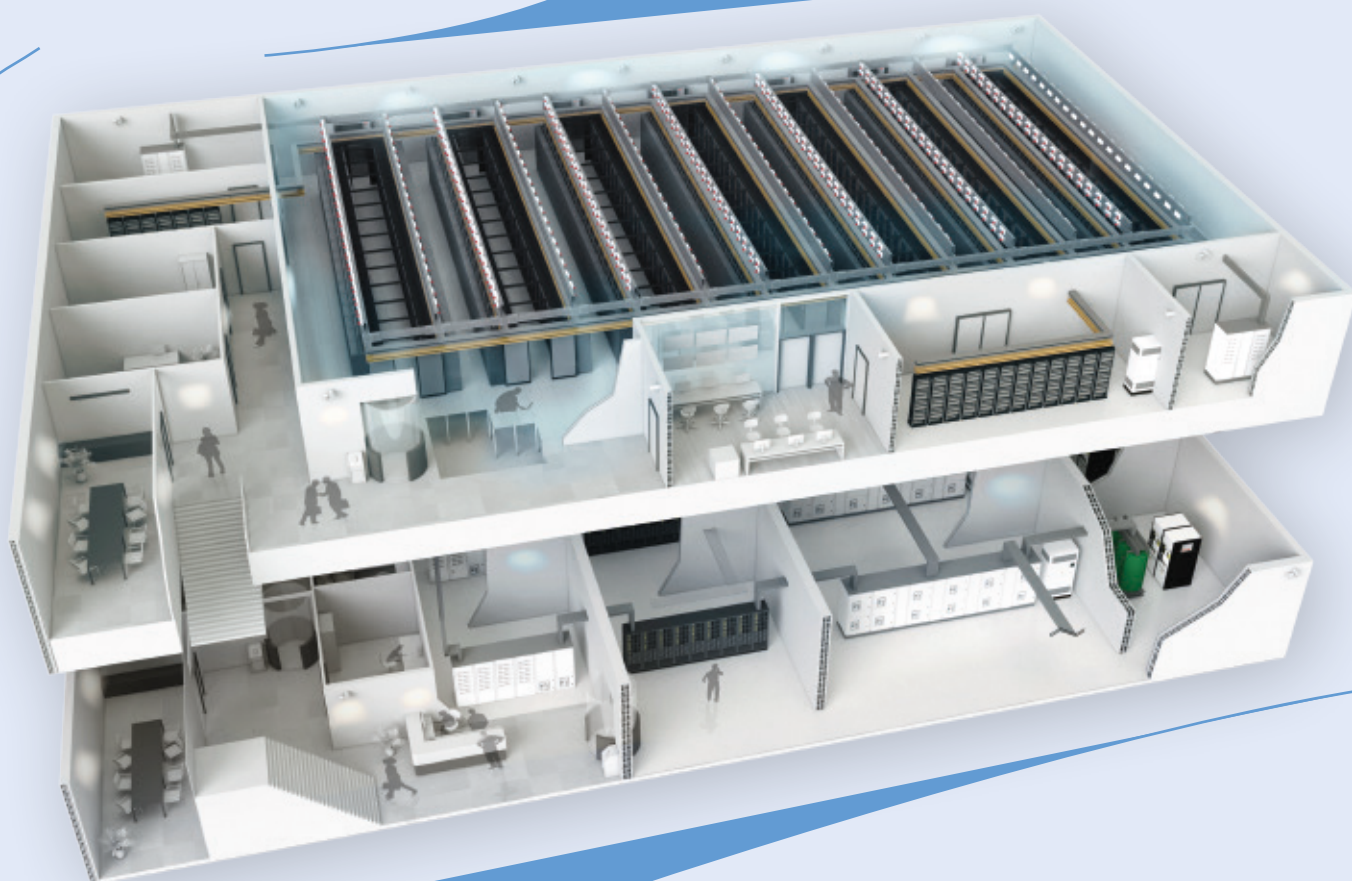
LEGRAND IS THE EXPERT IN THE 'TECHNICAL SPACE'

Legrand is a worldwide specialist in building-dependent (IT) infrastructure, including:

- Switches and distribution equipment
- Cable management systems
- UPS systems
- Rail conduit systems
- LCS³ data networks



The 'WHITE SPACE' is the space that is available for the IT infrastructure, the heart of the data centre!



The 'TECHNICAL SPACE' is a building-dependent, supporting infrastructure that is inextricably connected to the 'White Space'.

MODULAR, ENERGY EFFICIENT DATA CENTRE SOLUTIONS

Legrand and its subsidiary Minkels offer sustainable data centre solutions. The key concepts of modularity, flexibility and energy-efficiency have been implemented throughout the extensive product portfolio. This ensures that customers 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.

MINKELS

1. AISLE CONTAINMENT SOLUTIONS

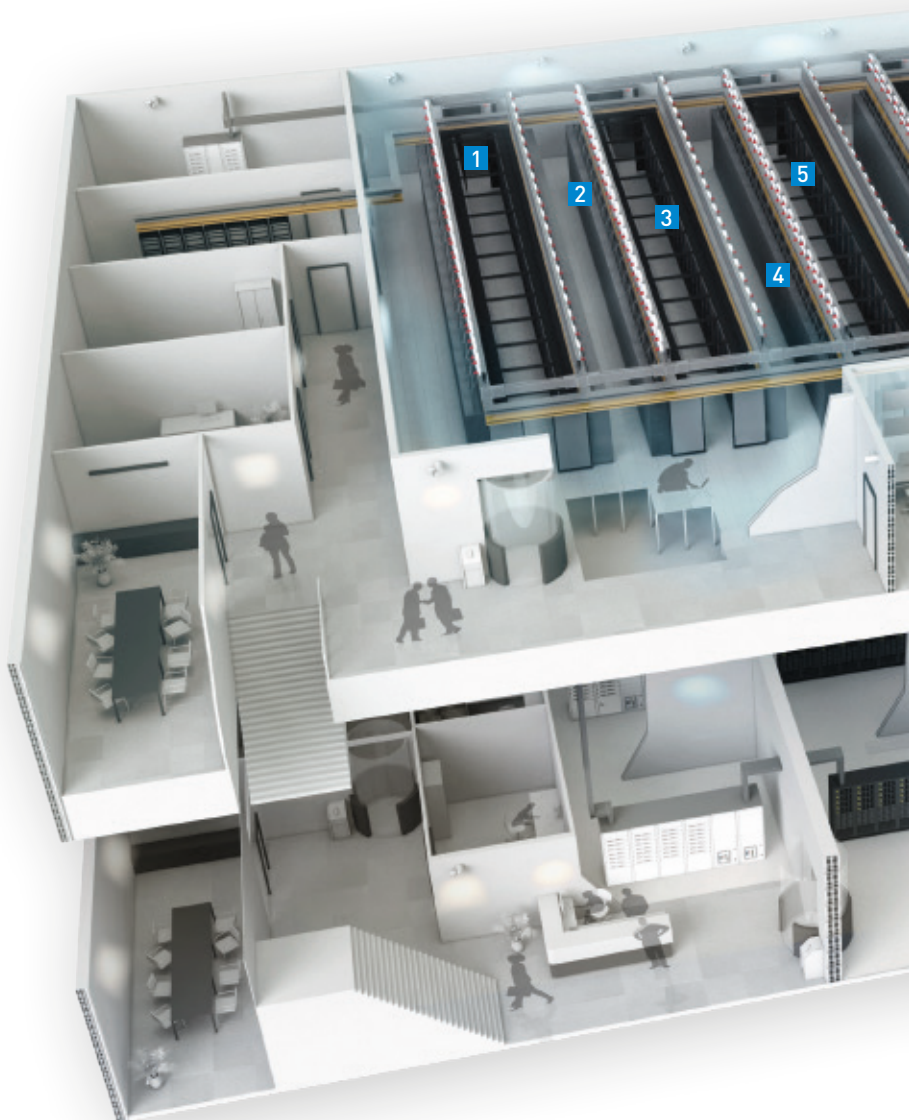
2. CO-LOCATION CABINETS

3. PATCH AND SERVER RACKS

4. ROW-BASED COOLING - H2O

5. ROW-BASED COOLING - DX

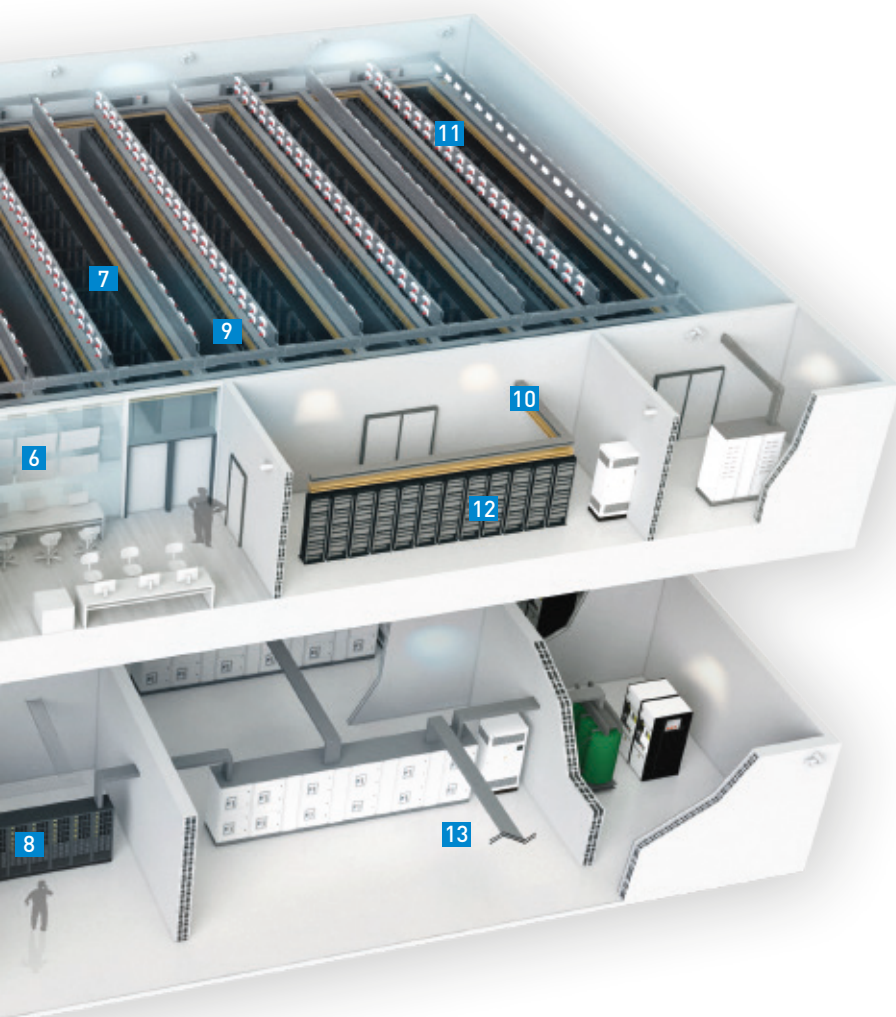
6. MONITORING



THE MINKELS MODULAR DATA CENTRE SOLUTIONS AND THE LEGRAND PRODUCTS COMPLEMENT EACH OTHER PERFECTLY.

There is a high level of synergy between the Legrand products and the Minkels solutions portfolio. While Minkels is a leading supplier in the international data centre market, a strong and powerful brand name with integrated data centre concepts including energy-efficient housing, cooling, monitoring and power distribution, Legrand is a global specialist with proven technologies in primarily building-related electrical installations and equipment





LEGRAND

7. POWER DISTRIBUTION UNITS

8. UPS

9. CABLOFIL CABLE DUCTS / P31 OFT

10. EZ PATH

11. RAIL CONDUIT SYSTEMS

12. LCS³ DATA SOLUTIONS

13. SWITCHES & DISTRIBUTION EQUIPMENT



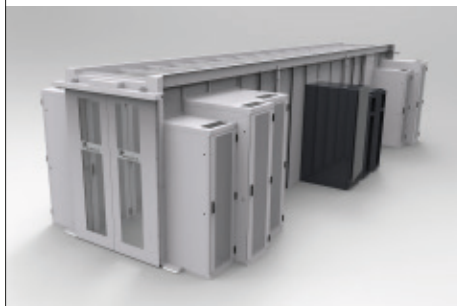
PRODUCT PORTFOLIO

1 MINKELS AISLE CONTAINMENT



The Next Generation aisle containment solution is the ultimate answer to the ever-increasing demand for flexible and modular solutions for an energy-efficient data centre design. The Minkels Next Generation aisle containment solution is rack supported and efficiently separates hot and cold airflows in data centres.

1 MINKELS FREE STANDING AISLE CONTAINMENT



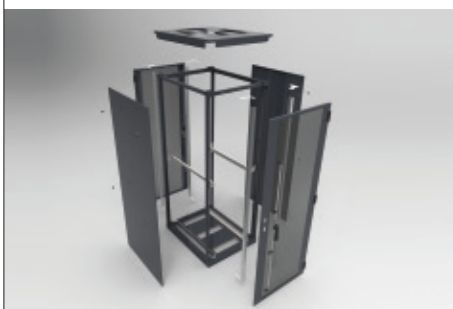
The Minkels Free Standing aisle containment solution is the ultimate and cost-effective free-standing aisle containment system. This free-standing system offers 'pay-as-you-grow' capabilities with infrastructure fitted for phased rack population. The Free Standing aisle efficiently separates hot and cold airflows, so now investments in racks can be spread over time.

2 MINKELS COLOCATION CABINETS



The Minkels compartmentalised colocation cabinets are ideal for keeping multiple end-customer systems together in a cabinet, each one securely separated from the others.

3 MINKELS PATCH AND SERVER RACKS



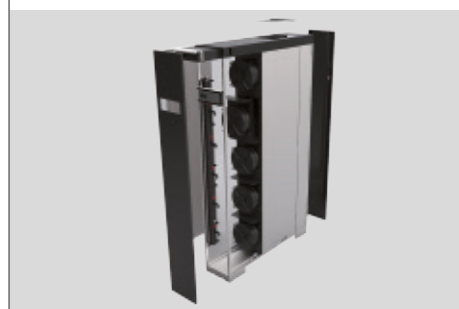
The Minkels patch and server racks are very well-suited for housing (blade) servers, switches, patch panels, routers and storage equipment. You can choose a default rack configuration, or you can also easily configure a rack yourself with the aid of digital tools. The racks are available in different heights, widths and depths.

4 MINKELS ROW-BASED COOLING - H2O



VariCondition-H2O helps you solve high density challenges in the most energy and cost efficient manner possible. These row-based cooling units are placed between the 19" (server) racks and provide reliable cooling capacity in a very efficient and flexible manner. The Minkels VariCondition-H2O products are characterised by their flexibility. For example, there are options available for separating and optimising airflow in and around the 19" racks.

5 MINKELS ROW-BASED COOLING - DX



VariCondition-DX is an easy to install, energy-efficient cooling solution. This cooling solution is well-suited for placement between the 19" racks. The cool air is routed directly to your valuable IT equipment. A raised floor is not necessary. The product is designed to provide targeted cooling for your IT equipment in a professional and reliable manner. It is also a much better alternative to traditional comfort cooling systems.

6 MINKELS MONITORING



Minkels has a wide range of Monitoring & Management solutions. They vary from simple power or environmental monitoring solutions to fully integrated data centre monitoring systems and software.

7 POWER & CONNECTIVITY



Together with Legrand, Minkels offers a product range fully adapted to the market demands, which will satisfy not only today, but also tomorrow's needs and demands. The Minkels Power & Connectivity portfolio contains a complete range of data centre power-division solutions.

8 LEGRAND UPS



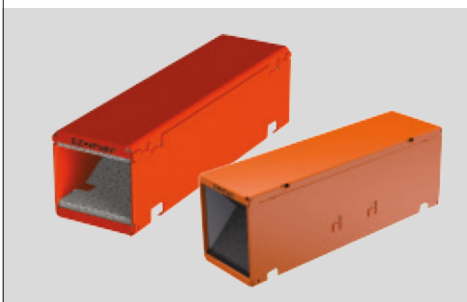
The modular UPS systems provide data centres with a modular UPS solution ranging in power capacity from 20 to 480 kVA, for an uninterrupted source of energy with uptime guarantees. The UPS system is a highly energy-efficient solution that can provide 2N power supply: maximum protection against power outages. It is a highly modular solution, which includes power and battery modules that can be exchanged separately as well as phased power capacity options.

9 LEGRAND CABLOFIL CABLE DUCTS



These cable ducts offer diverse possibilities for vertical cable management inside the cabinet.

10 LEGRAND EZ PATH



EZ-Path provides you with a fire-safe solution for routing cables through walls and floors. In case of fire, the foam in the EZ-Path will fully expand so that the fire cannot cross over to the next room or floor, etc.

11 LEGRAND RAIL CONDUIT SYSTEMS



The configuration of the rail conduit system with smart tap-off boxes can be adapted to customer-specific aisle containment layouts in data centres. The system provides a structure for data centre power distribution for power capacities between 160 amperes (A) and 1,000 amperes (A). The system can be easily upgraded if expansion of the existing installation is necessary.

12 LEGRAND FIBRE



Fibre technology provides an ultra-high speed, reliable connection. Legrand supplies the separate fibre and can also supply specific DC pre-assembled fibre connections to connect two server cabinets. There are Fan-out - OM3 & OS2 Fan-out micro cables available with 12 or 24 fibres and LC Duplex connectors with MTP - MTP micro cable OM3 & OS1/OS2. The lengths vary from 10 to 50 metres.

13 LEGRAND SWITCHES AND DISTRIBUTION EQUIPMENT



The Legrand switches and distribution equipment for up to 6300 amperes provide a phased capacity structure for power distribution, unparalleled capabilities for low voltage distributors and components for utilities, data centres and industry. These are safe products with a reliable quality that are at the heart of your installation.

The switches and distribution equipment comply with the highest international quality standards (can be built according to IEC 61439). Structured installations are compact in assembly, but also come with well thought-out details for time savings, security and safety, convenience and ergonomics (possible up to structure form 4b and service level IS333).



Please see our comprehensive data centre brochures for further information: WWW.MINKELS.COM/DOWNLOADS or WWW.LEGRAND.CO.UK



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