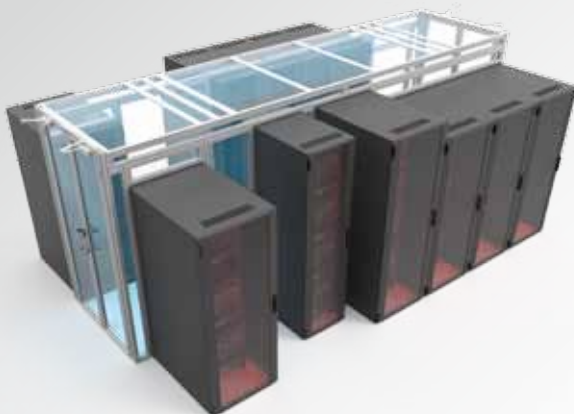


# modulan

data centre solutions

## Solutions for IT-Infrastructures



We aim to be the best in our trade.  
To achieve this we do not compromise: this means only  
accepting the best possible solution.  
To do so we focus on our strengths which are the  
building **blocks** of our success.

### Reliability

We keep our promises.

### Innovative

We develop tomorrow's products today.

### Service

We don't only offer assistance. We actively support you as a trusted partner, from the point of your initial idea, through the planning and installation phase and continue our support with the subsequent maintenance of our products.

### Speed of Action

Our structured and clearly organized production and administration processes help us to maintain swift reaction and a short response time.

### Customer Orientation

We concentrate on your ideas and implement them.

### Quality

Our aim is comprehensive satisfaction for our clients so that even in the future, today's products will be regarded as market leading and top of the line.

### Flexibility

Our lean administration and flat hierarchy allow us to remain flexible and respond very quickly to new demands.







# Is that possible? Of course!

With us, you don't have to make do with the standard solution!

Every data centre is as unique as the operators who run it.

As a result, we intentionally refrain from orienting your requirements towards just any old standard! Instead, we prefer to adapt the standard to suit your requirements. Compromises in terms of quality and speed are unacceptable to us.

Our products consist of systematised assemblies that we largely manufacture ourselves. This allows us to implement our projects particularly quickly in line with our highest quality standards, even if they contain components that have never been made before.

We strive to implement your ideas and expectations as efficiently and economically as possible here.

## We don't sell DC solutions. We offer a partnership!

modulan is a family-run company based in Nidderau, close to Frankfurt am Main. Even in 2004, when the company was founded, we oriented our company goal towards revolutionising the market with forward-looking innovations, uncompromising quality and outstanding services. Thirty employees now give their all every day to further pursue this goal. At the same time, we combine a demand for top performance, motivation and taking pleasure in our work.

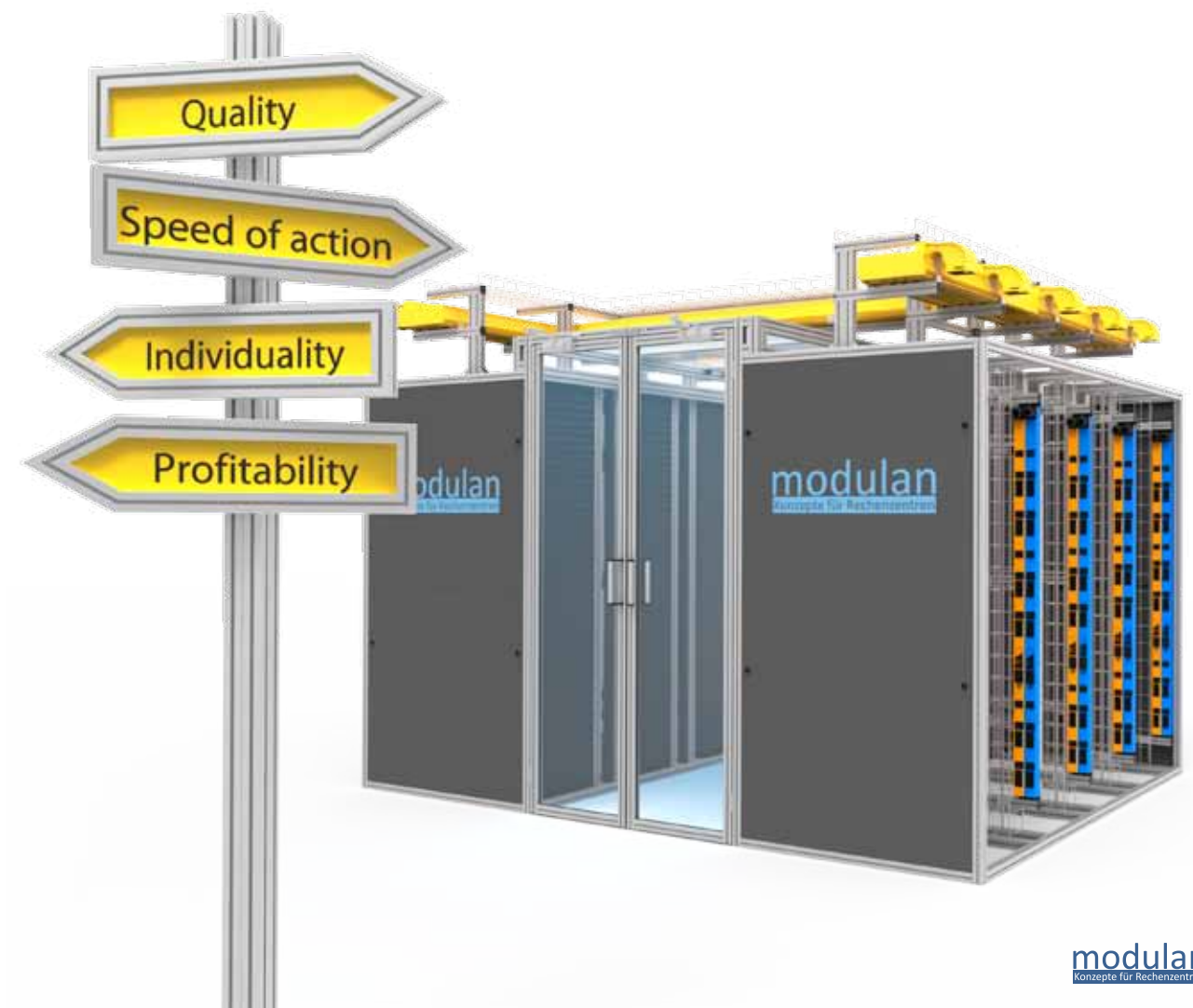
We create value for our customers, business partners and employees through our core competencies, developing and manufacturing high-quality data centre equipment. To achieve this, we work with the highest degree of efficiency, effectiveness and innovation. We constantly develop our products further and identify trends long before the market picks up

on them. Together with our business partners, we overcome obstacles and limitations in order to always stay one step ahead.

When collaborating with our suppliers, we pay attention to their needs just as much as our own. We reward excellent performance with sustainability and loyalty.

Fairness towards our competitors is essential for us. We set this standard with regard to our fighting spirit.

We always keep our eye firmly on our goal: we want to offer our customers the best solution and implement this optimally. With no ifs or buts.



# As versatile as a Swiss Army Knife...

The basis for this versatility consists of a balanced interaction between innovative products and the ability to apply these constructively. The expertise and pioneering spirit of our design engineers also allow us to overcome obstacles and resistance that would cause others to fail.

We analyse your needs in order to create the right solution for you. Whether it be the optimum use of space with 19" racks, an air conditioning system with the utmost efficiency, or clearly structured cable management – when making all of our recommendations, we draw on our many years of experience and an array of implemented projects with satisfied customers.



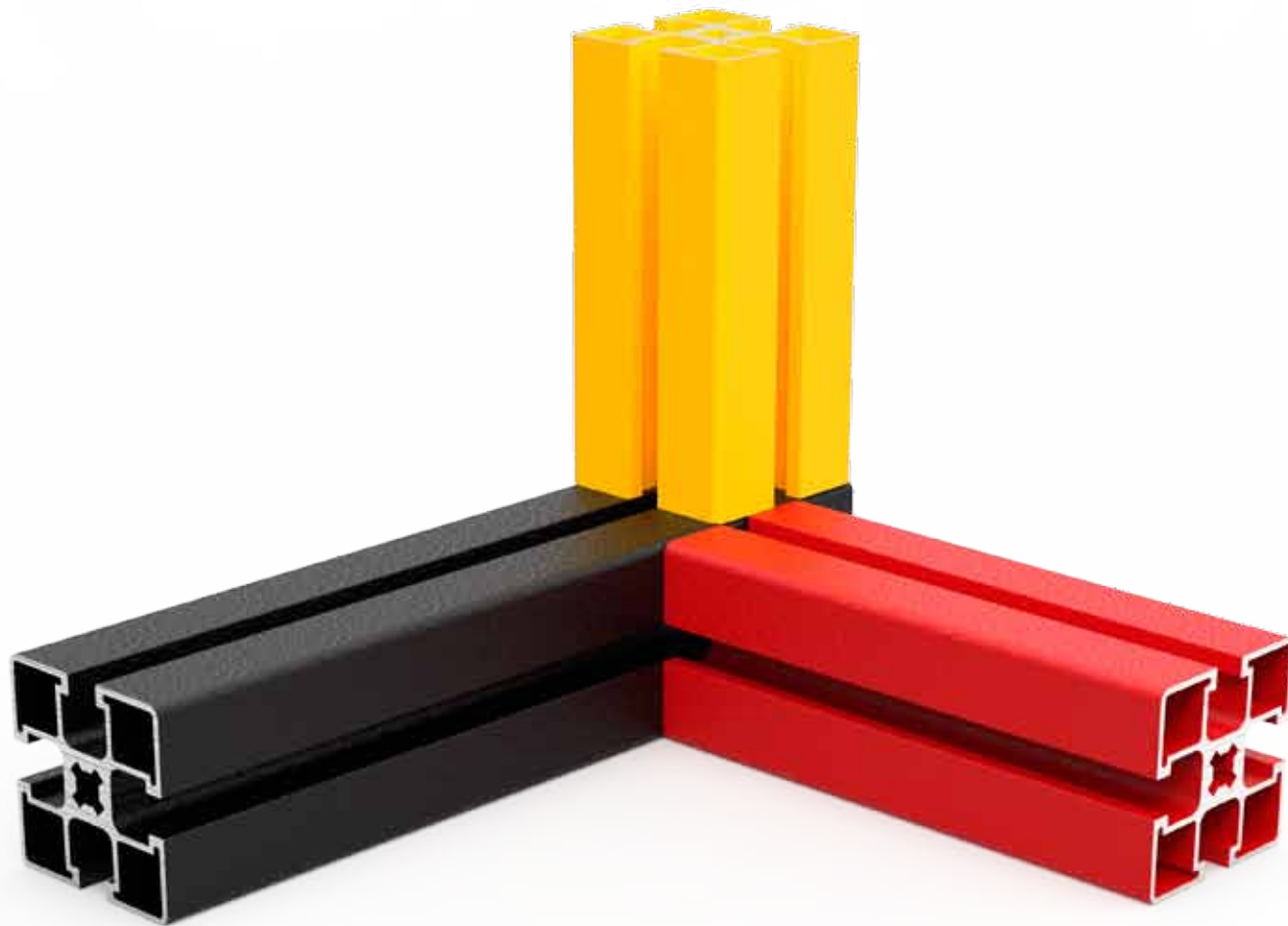
## Unlimited areas of application

We have a solution for everything! We do not simply think in terms of the dimensions of a 19" rack. The entire data centre and its operators play a primary role for us when we tackle a project. We use our ideas to make your wishes a reality in a perfectly coordinated product composition that combines all of the requirements.



# Consistently high quality

Naturally manufactured in Germany!



We manufacture in Germany and also pay our taxes here. The same applies to our suppliers too.

This cannot be explained by our quality standards alone, but rather by our sense of responsibility.

We prefer to achieve our price-performance ratio with efficiency and effectiveness instead of questioning our manufacturing location due to cost reasons.

## We give your ideas a form!

And supervise your project from A to Z.

"What is wanted, what is needed? And how can these requirements be implemented economically?"

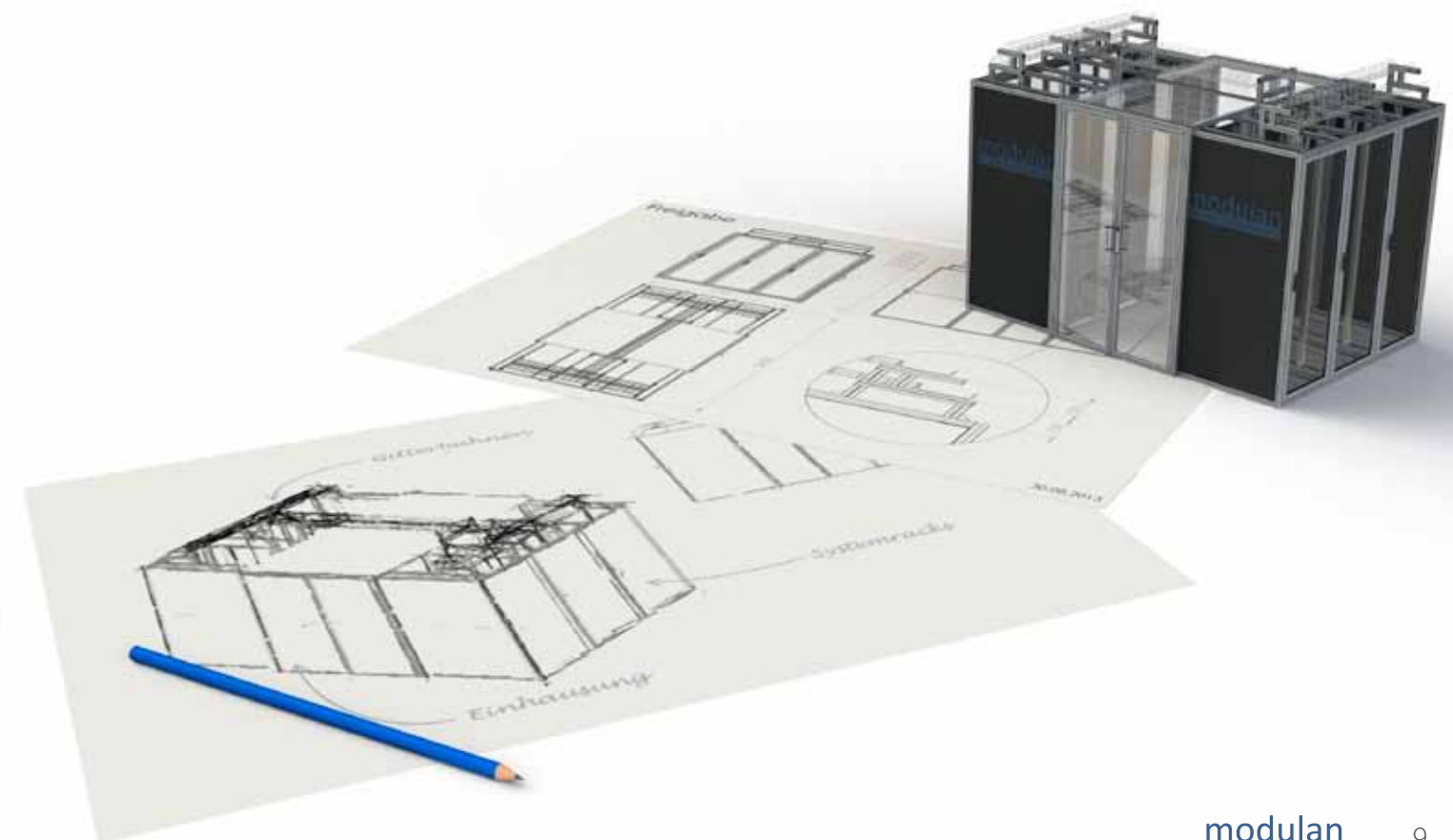
Sometimes the project itself is not the biggest challenge, but rather the decision-making that precedes it. Things become particularly difficult if you do not wish to make use of standard options, but rather incorporate your own ideas.

A fear of making the wrong decision at this stage soon causes you to want to abandon your own expectations and stick to familiar solutions.

Unfortunately, this means the solution falls short of its potential and a real further development is often thwarted by the limited options offered by the supplier.

It is good to have a partner by your side who doesn't allow this problem to occur in the first place. Someone who specialises in going off the beaten track, and can discover and implement the optimum solution.

We begin every business relationship with a personal meeting in which we listen to you. We work with you to develop solutions that best suit your specific requirements and give your ideas a form.



No copy can ever  
match the original



We develop the products of tomorrow today for you!

Behind our experience in conceptual solution development and product advancement lies a continuous innovation process. Thanks to our own manufacturing, we have the unlimited freedom to permanently further develop and improve our products, while also building them to optimally meet customer requirements.

Challenging problems are our speciality here. We know and understand that every data centre is unique, whether it be its spatial conditions or the demands of its operators. We thus create unique solutions that we develop with the utmost expertise. We intentionally refrain from pushing our customers towards standard solutions that do not meet their needs. This is what makes modulan and its solutions unique.

## Premium materials

Our products are made of highly flexible aluminum profiles. Apart from being lightweight, which of course reduces the net weight of the cabinet system itself, the aluminum profiles offer surprising possibilities for mounting accessories. Solid connections allow for professional assembly of cable management, equipment and power supply. On top of that, our products are designed to be compatible with accessories from all renowned suppliers. Easy processing allows us to design custom-made solutions which meet your individual needs and wishes.



### Low net weight

Reduces the load on the raised floor and enables easy transport.

### High level of stability

Ensures a long service life and offers perfect protection for your equipment.

### Unlimited flexibility

Offers the possibility to meet all your individual requirements - even if your requirements change at a later point in time.

### Neat joints

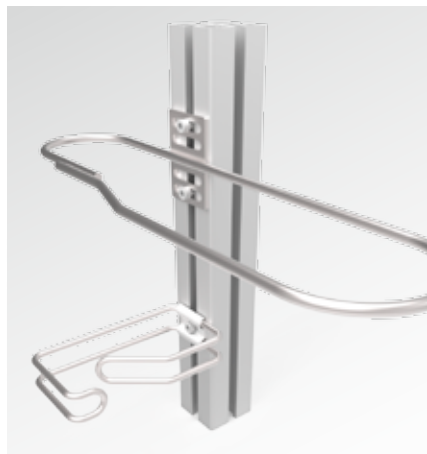
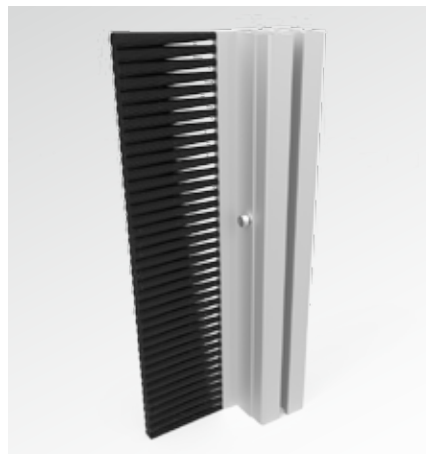
Ensures that accessories can be mounted everywhere on the frame. Special nuts are used for mounting so that all accessories can be moved at anytime and adjusted smoothly as required.



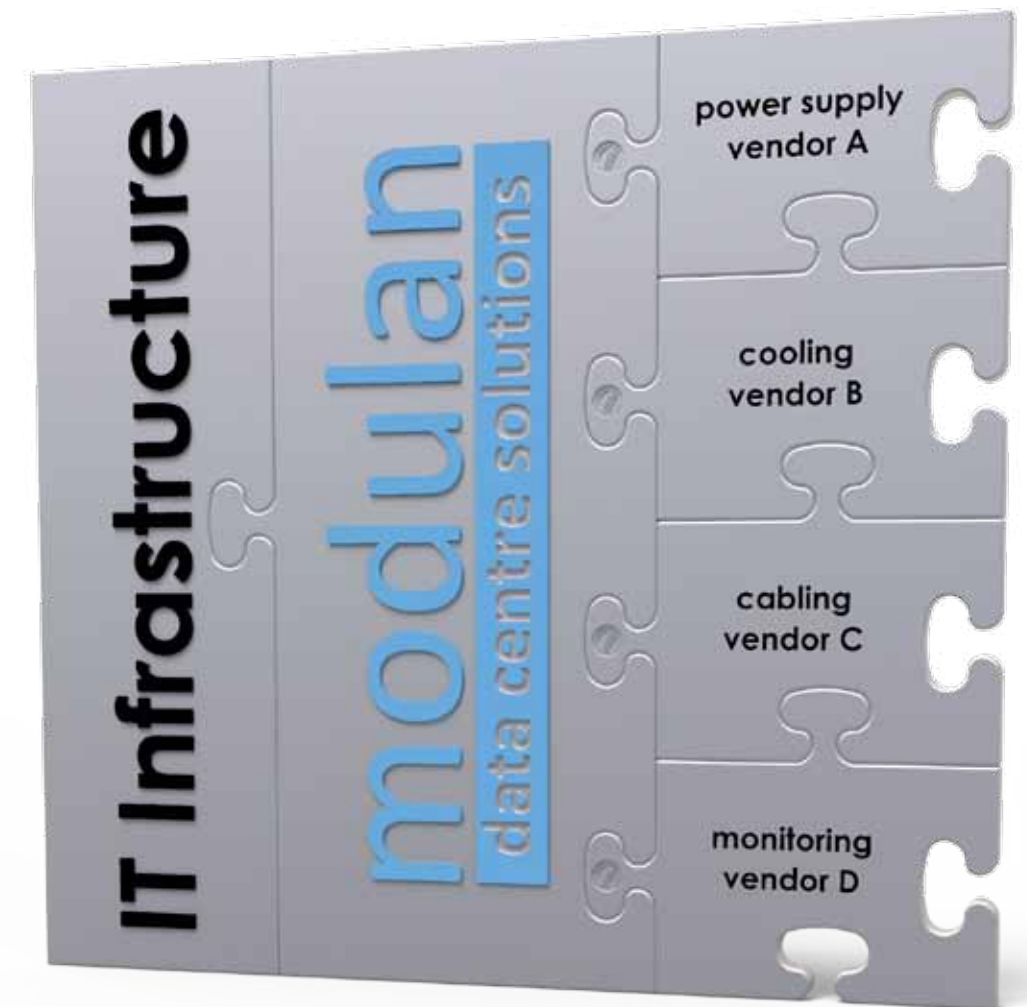


## Mounting accessories

modulan racks allow you to easily mount accessories anywhere inside and outside the rack. The flexible aluminum profiles are fully compatible with the accessories of all renowned suppliers. Furthermore, mounting those accessories is easy and convenient..



## Full compatibility



In order to offer one of the most comprehensive accessories programmes, we only cooperate with the best of their trade. System accessories of all renowned suppliers can easily be integrated into our racks and there are no infringements on usability. If we encounter problems, we have not yet needed to solve, we will work together with you, developing new and suitable concepts and solutions.

# Proven functionality, new concept

The SE rack perfectly combines the merits of individual cabinets and system racks: Simple scalability and uncomplicated design of the row layout combined with a superior, open construction. There is thus no need to make any fundamental decisions in advance regarding the design of the computer centre.

SE racks

# No compromises





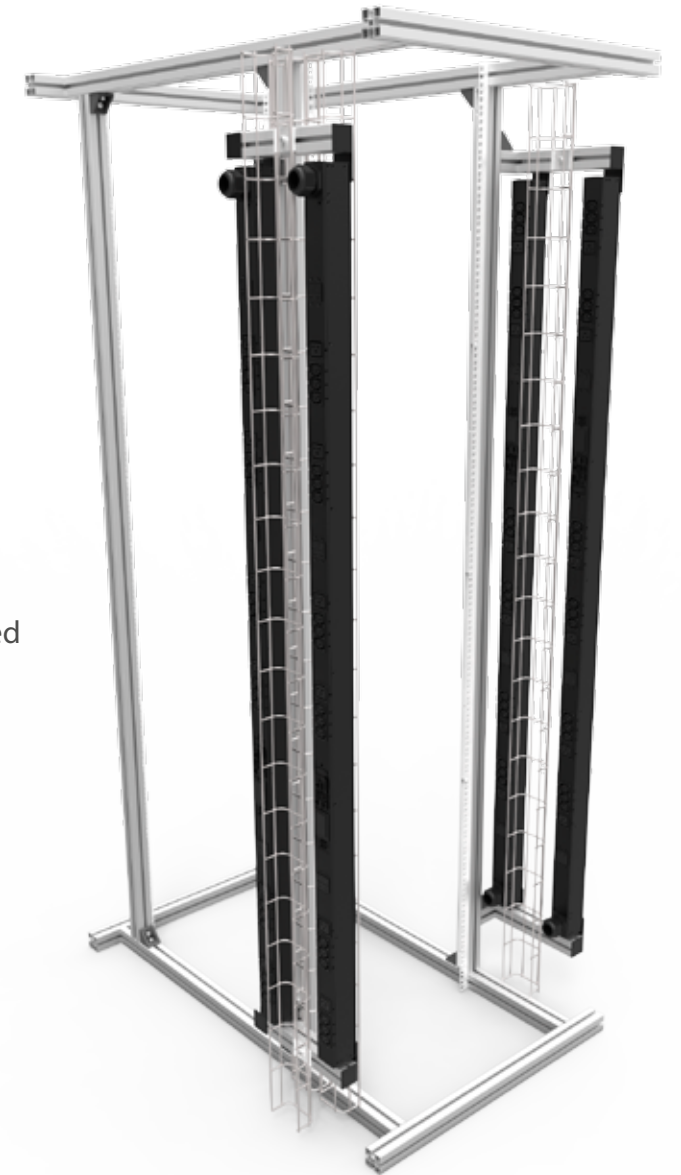
## Greater stability

The use of solid aluminium bars as load-bearing elements for the 19" rails increases the stability of the SE rack significantly. The rails gain an enormous torsional stiffness and can withstand much greater loads than conventional rails made from pure sheet steel. In this way, the requirements placed on a heavy-load rack are also fulfilled with ease.



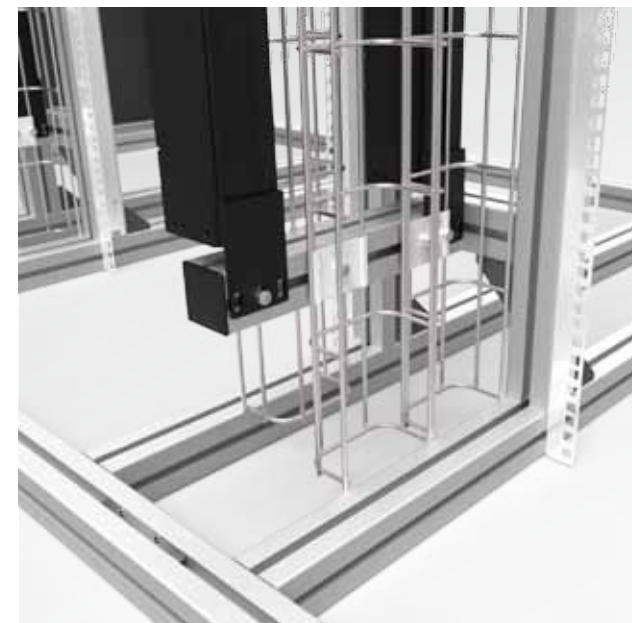
## More possibilities

The fixing of the accessory parts, such as cable management or PDUs, directly to the 19" rails is a thing of the past for the SE racks. The additional aluminium profile enables placement with millimetre precision and unsurpassed stability in fixation. The accessibility of the frame is not impaired by this.



## Advanced construction

As the new 19" rails are now load-bearing, individual sections of the SE racks can be completely preassembled. The actual assembly in the computer centre is thus limited to merely arranging the units. If preferred, this can also be performed by the user himself without any problems.

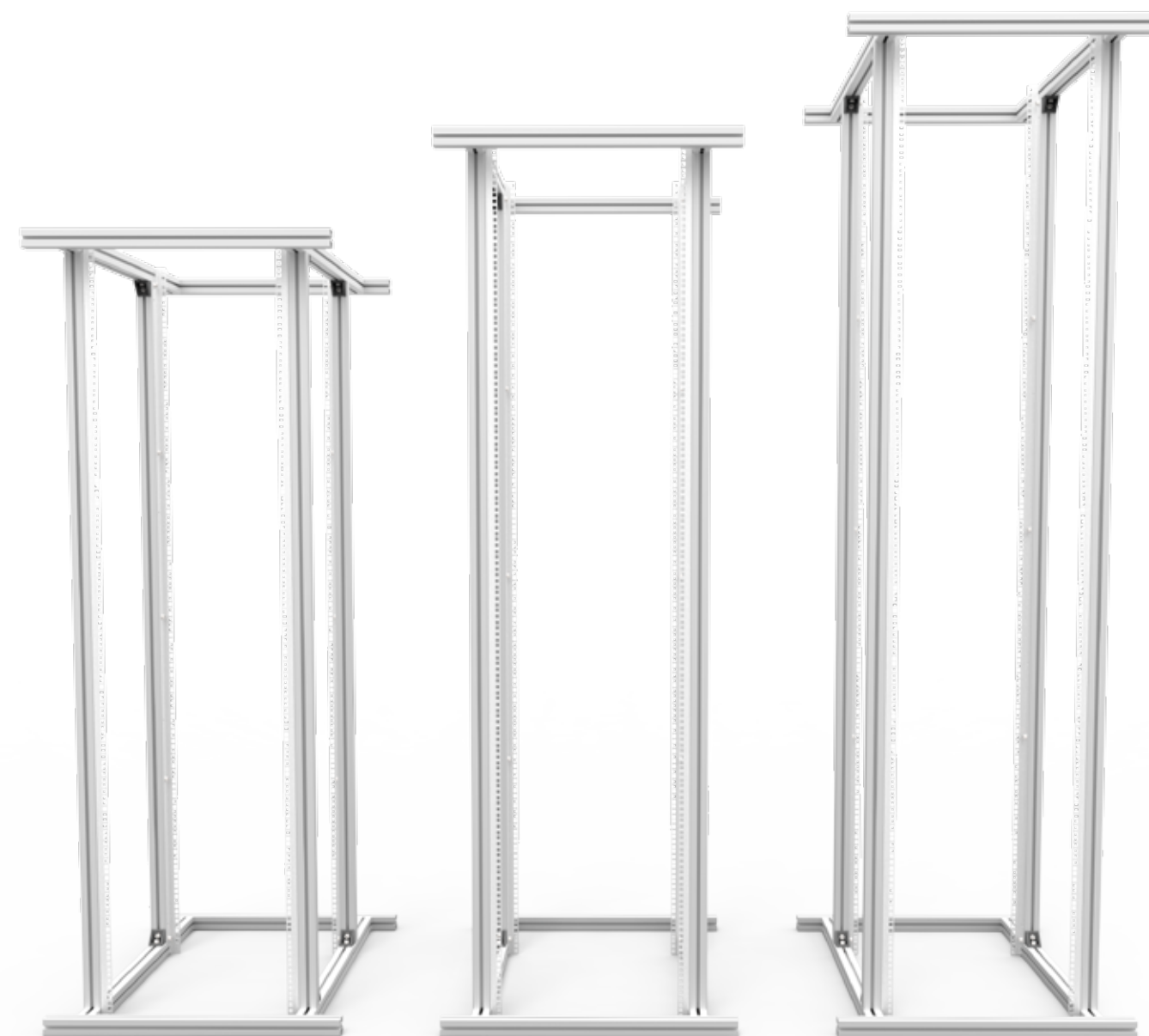


All four 19" rails now feature aluminium profiles that offer a first-class basis for further fixation elements.



# The right height for all

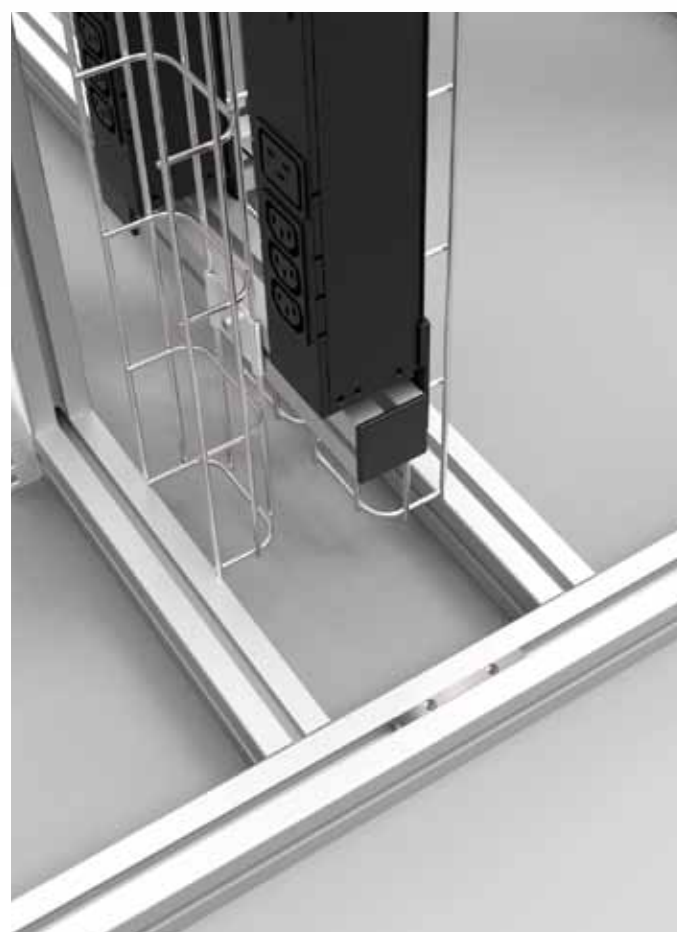
Make a choice based on your spatial conditions or your personal requirements:  
The system units are available to you in three standard sizes:



42+2 RU  
2.000 mm

48+2 RU  
2.240 mm

54+2 RU  
2.505 mm



## Easy to arrange

The SE racks are just as simple and easy to arrange as the individual racks. Once the cross profiles are connected, the look of the entire row resembles that of the system racks: an open, perfectly accessible construction.



# Revised door concept

The newly developed profile hinge now makes it possible to attach doors anywhere you like on the frame without a frame brace needing to be available. This improves the look and facilitates subsequent fitting.



## Real 180°

The pivot point for the profile hinge was placed further in front of the racks. This enables the doors to be opened a full 180° without hitting the handle of the neighbouring door.



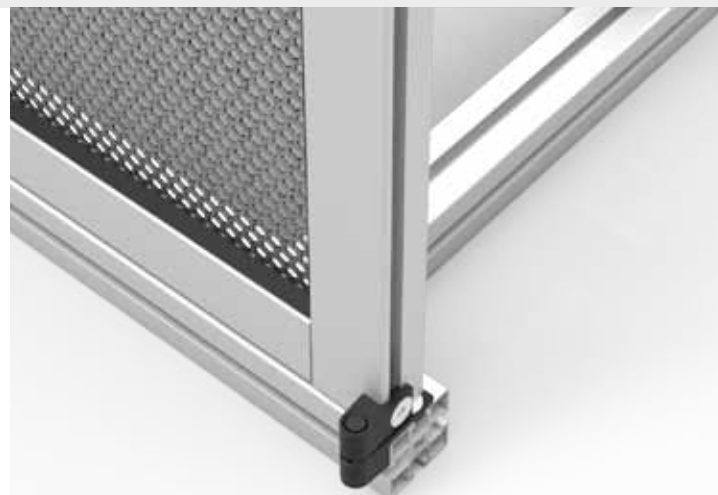
## Options

To meet all the requirements placed on a rack door, the individual approach to the system racks was also continued here: Whether one- or two-wing, or without the use of a mounting frame for PDUs or extinguishing systems - the options are limitless.



## 1,2, open

A further strength of the profile hinge is the simple, tool-free hanging of the doors. For instance, the complete row can be quickly and easily opened if required during cabling work.







## Custom-made solution for the whole of your data centre

Use every precious millimetre of your data centre space. Even the layout of your computer room does not matter, modular system racks are designed to adapt. This eliminates dead space beside the cabinets and you will optimise the surface area available.



Integration of pillars etc. into the racks

- The unique construction of the aluminum frame makes it easy and inexpensive to implement your requirements. It is not even necessary to order large quantities.
- Instead of letting space go to waste, it is simply integrated into the cabinet system and used wisely.

No matter which path you choose, with our support you will reach your destination without any detours!

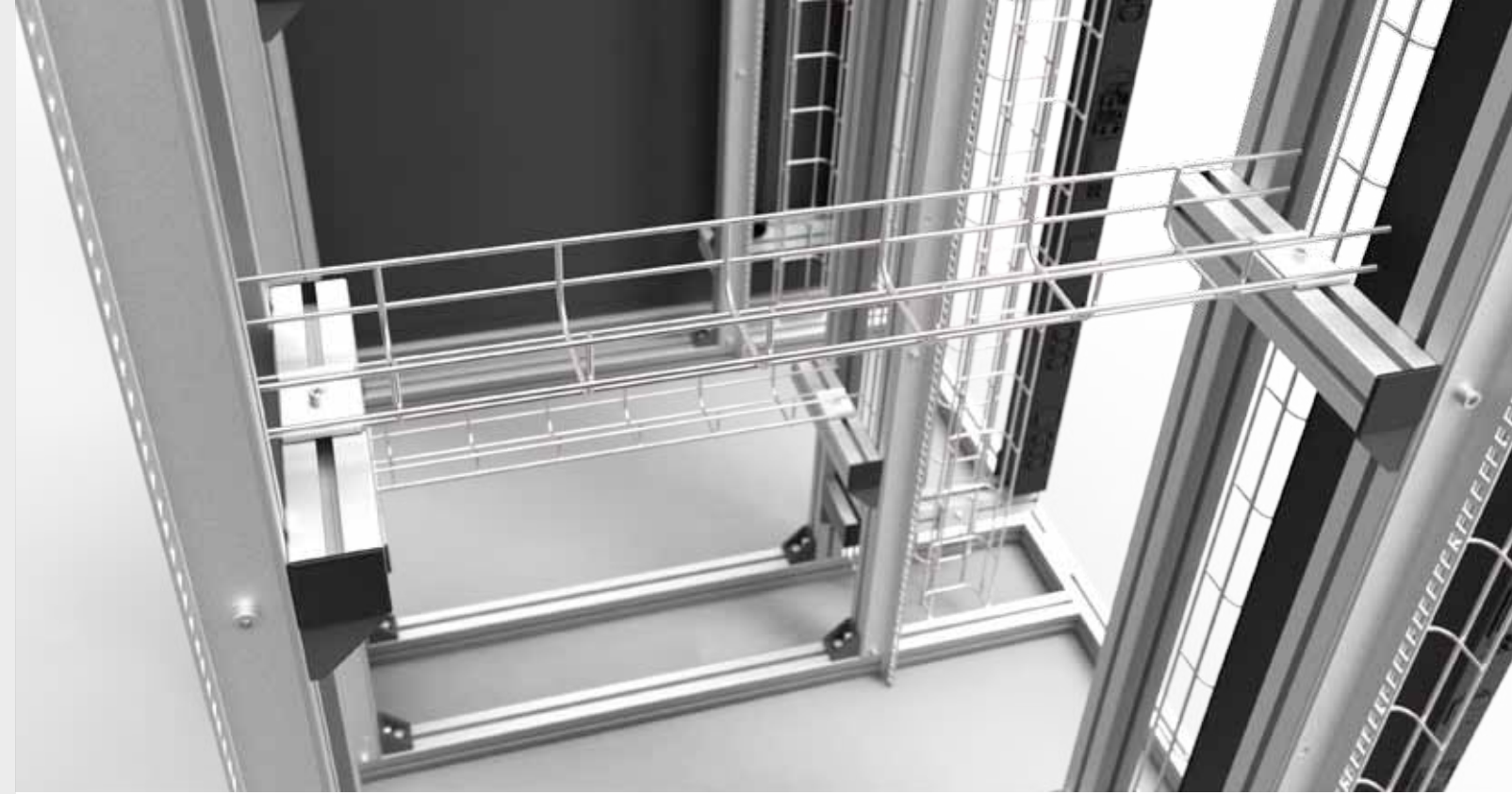
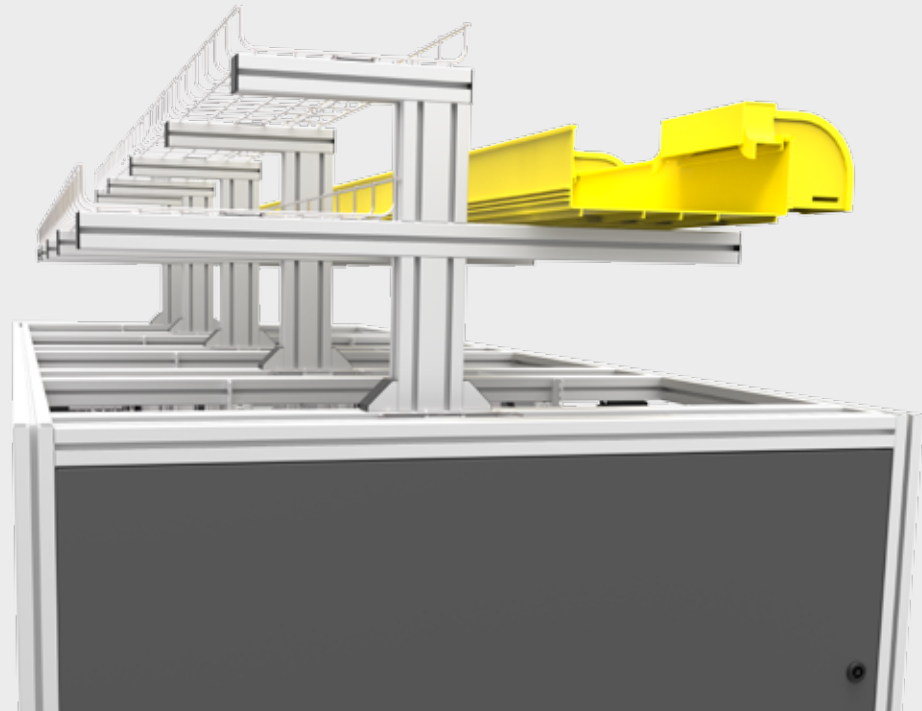




# Cabelmanagement

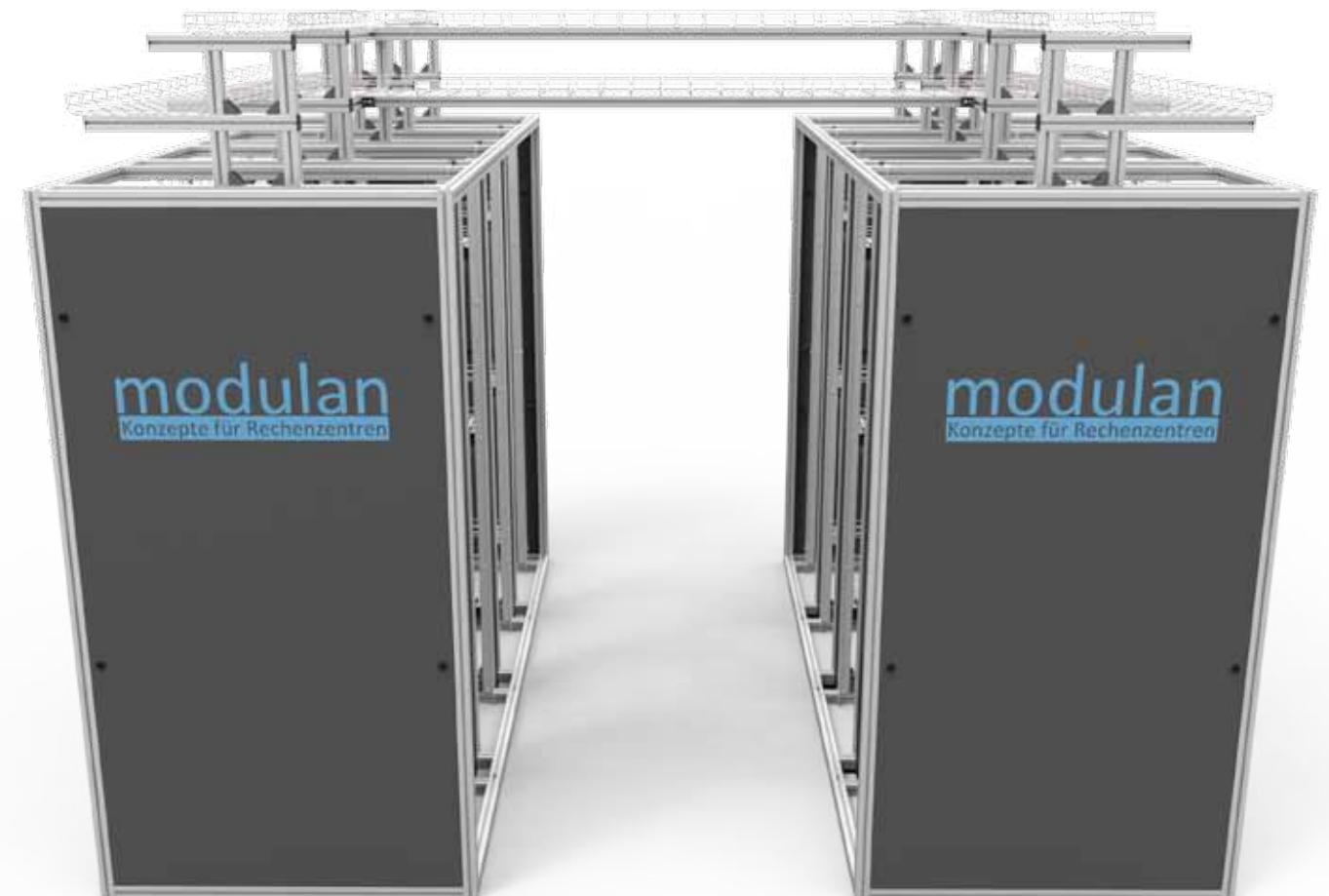
## Improved access

There are also new developments above the racks. For instance, the newly designed cable management offers more possibilities for positioning while also featuring improved access to the cable lines. Thanks to a consistent construction, as many levels can be created as you like, with none of them restricting access to any other.



## From front to back and from left to right

Due to stable aluminium struts, cable trays and cable lines can be fixed anywhere within and above the racks. Clean and clearly arranged cable management at any point within the racks is thus possible without any restrictions.







## Vertical cable management in the racks



## Simple installation of cable fingers



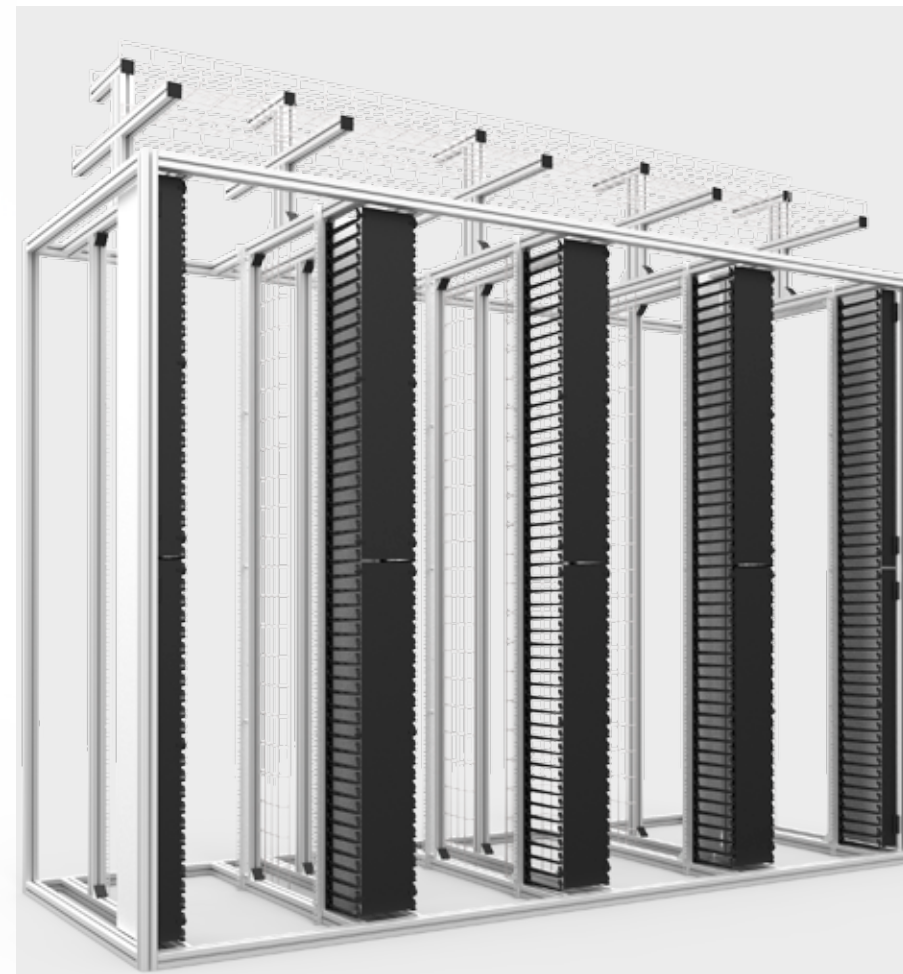
Thanks to predetermined breaking points, the cable fingers can be broken down into the desired quantity.



Simple clipping into the profile slot at any point in the frame or the 19" rail.



If required, the cable fingers can be fixed in place with a screw. However, this is not necessary in the case of full-surface application.



## When you want a little more

Our new, 200 mm-long cable fingers allow us to create an unparalleled cabling landscape within the racks. The possible combinations with wire cable trays or channels offer almost unlimited flexibility. And all up to 65 RU.

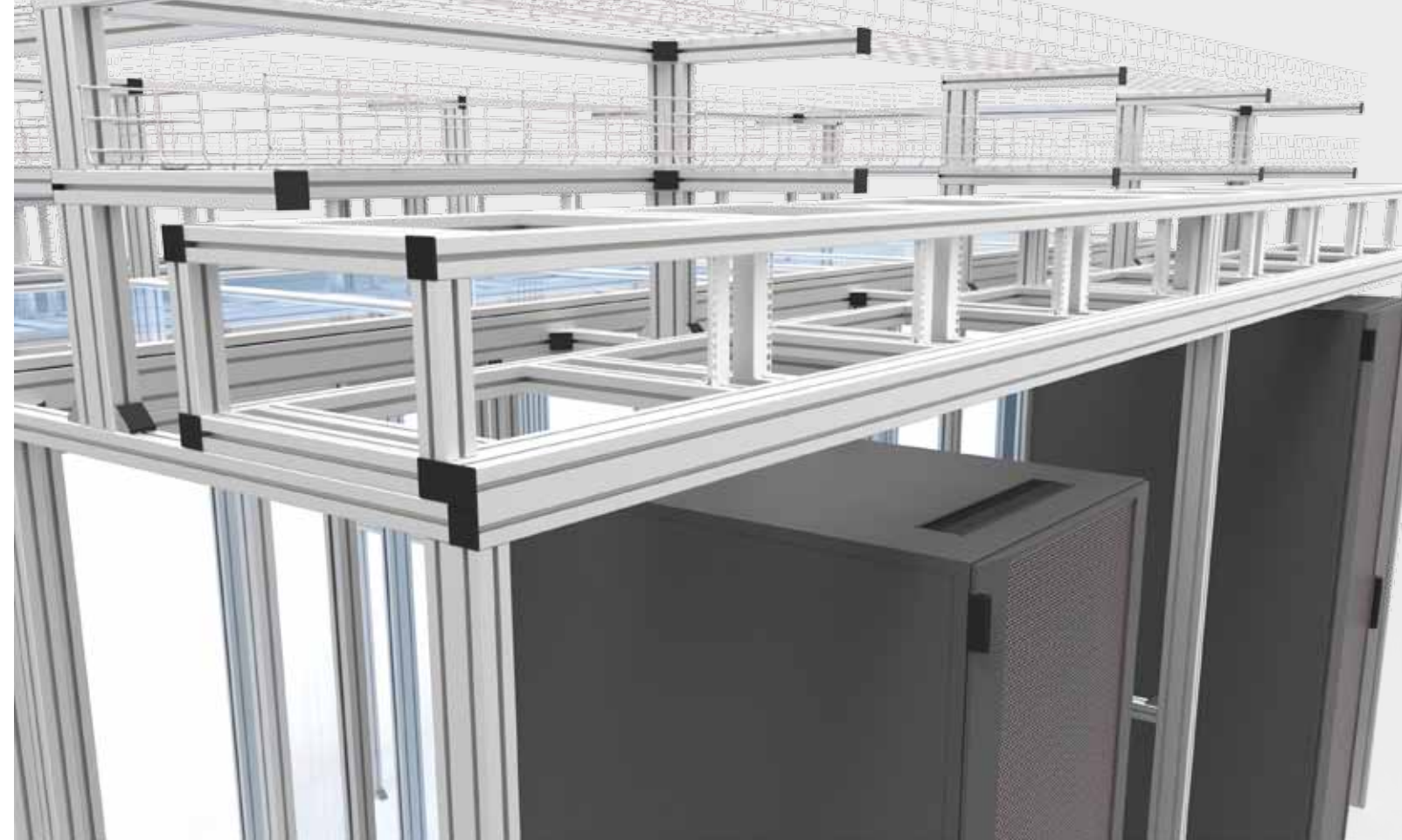


Tool-free: screw in and you're done!



# 100% flexible, 100% individual

Thanks to the versatile fixing options of the system frame and the open construction of the racks, complete cabling systems from third-party providers can be housed easily and conveniently.



## Infrastructure in advance

Would you like to implement cable management and cold air routing before the racks are set up? modulan solutions offer the ideal platform for this. This allows the row layouts to be planned conveniently later on without causing disadvantages in terms of structure and efficiency.





# Cages

To spatially subdivide  
your data centre



## Stand-alone or integrated

Depending on the space available and the individual requirements on the security concept, modulan offers various solutions: the stand-alone version as a classic implementation of the security cage with free-standing wall elements or an integrated version that uses the elements of the available racks and only secures corridors against unauthorised access. Both options can be combined as you wish.

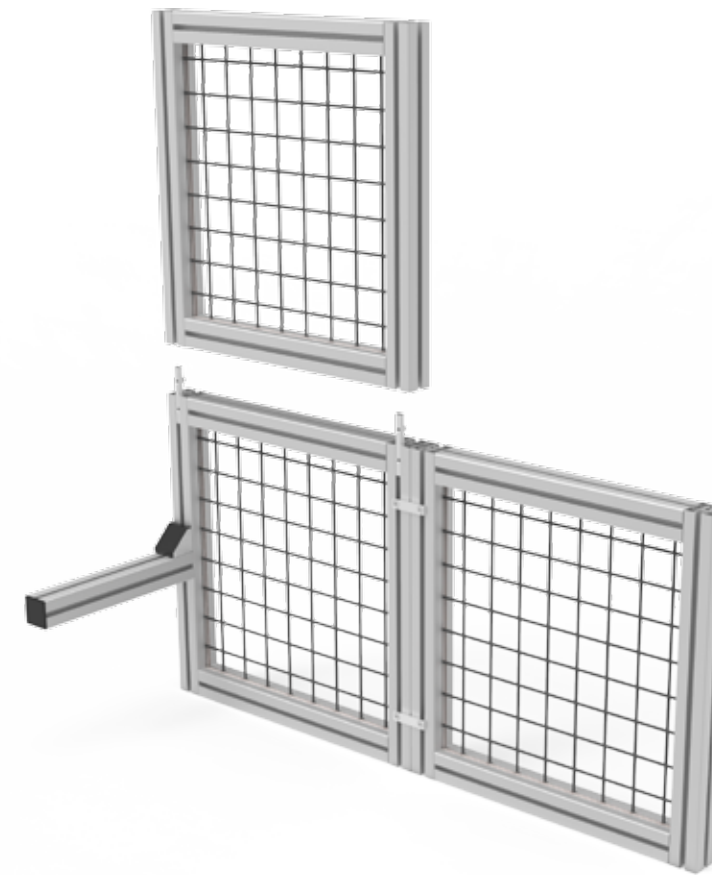
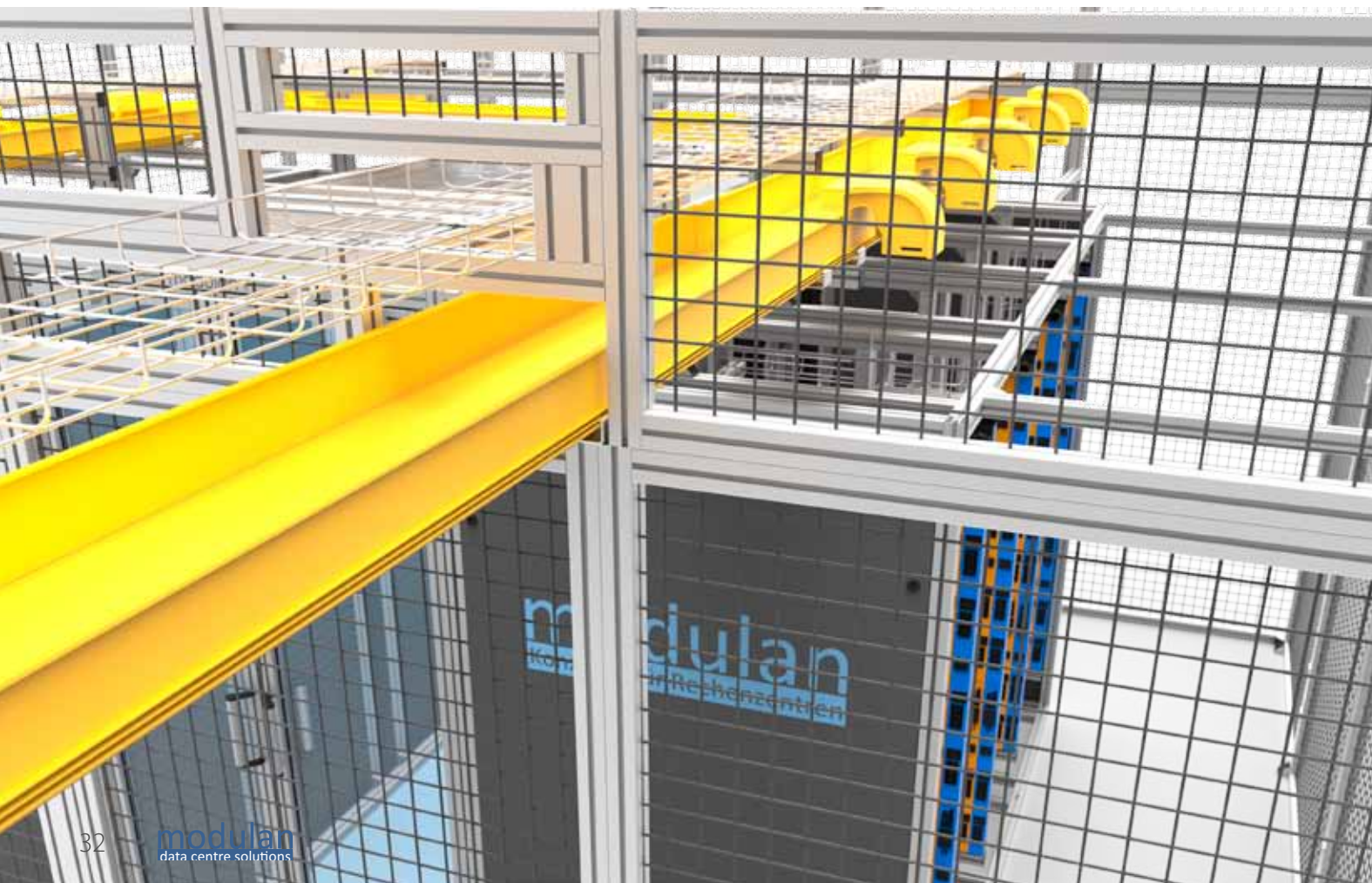






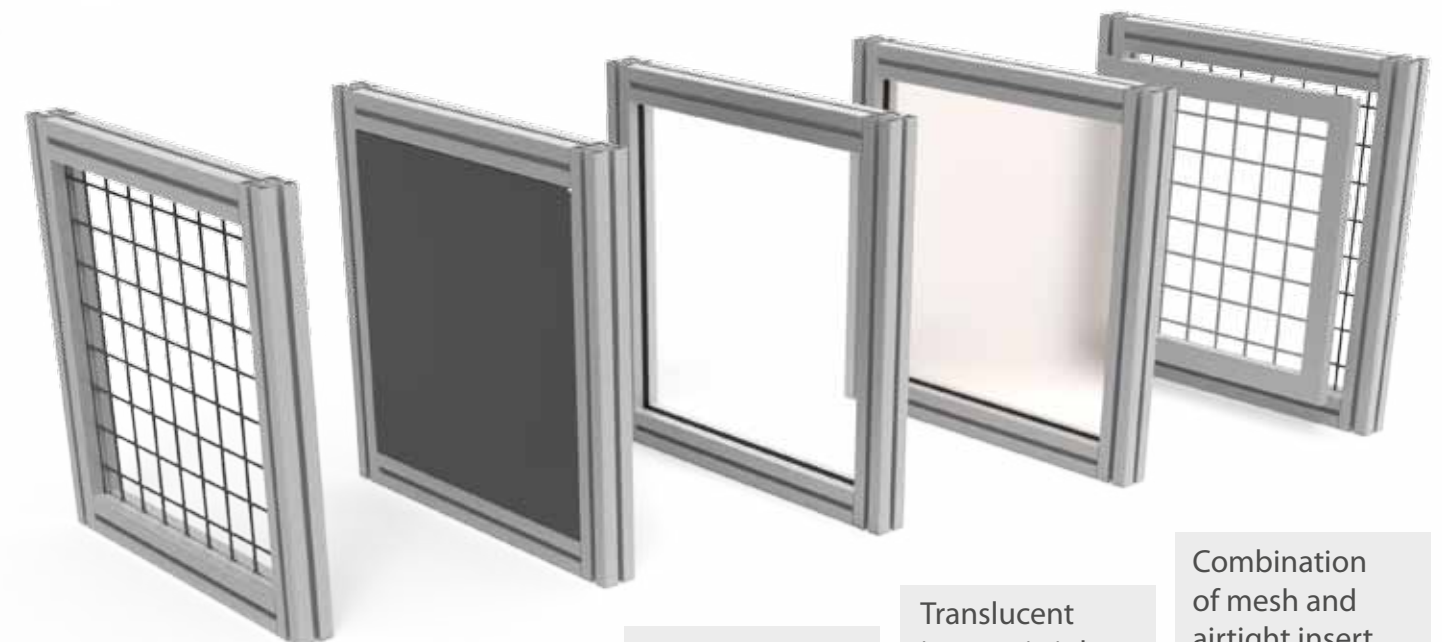
## We do not block everything out!

100% partitioning is sometimes not desired at certain points. The segment-based structure makes it possible, for instance, to create interfaces for cable management with millimetre precision. According to the same principle, spatial conditions such as beams or pipes can also be taken into account.



## Flexible connections

The modular cage elements are screwed to each other. This means that retrofitting is possible in no time and dismantling can take place using standard tools. Struts or booms for e.g. cable trays can also be fixed in place conveniently.



Mesh 50 x 50 made from 4 mm round steel, painted in all common RAL colours.

Metal insert screwed, airtight, painted in all common RAL colours.

Transparent insert, airtight, suitable for cold and warm air separation.

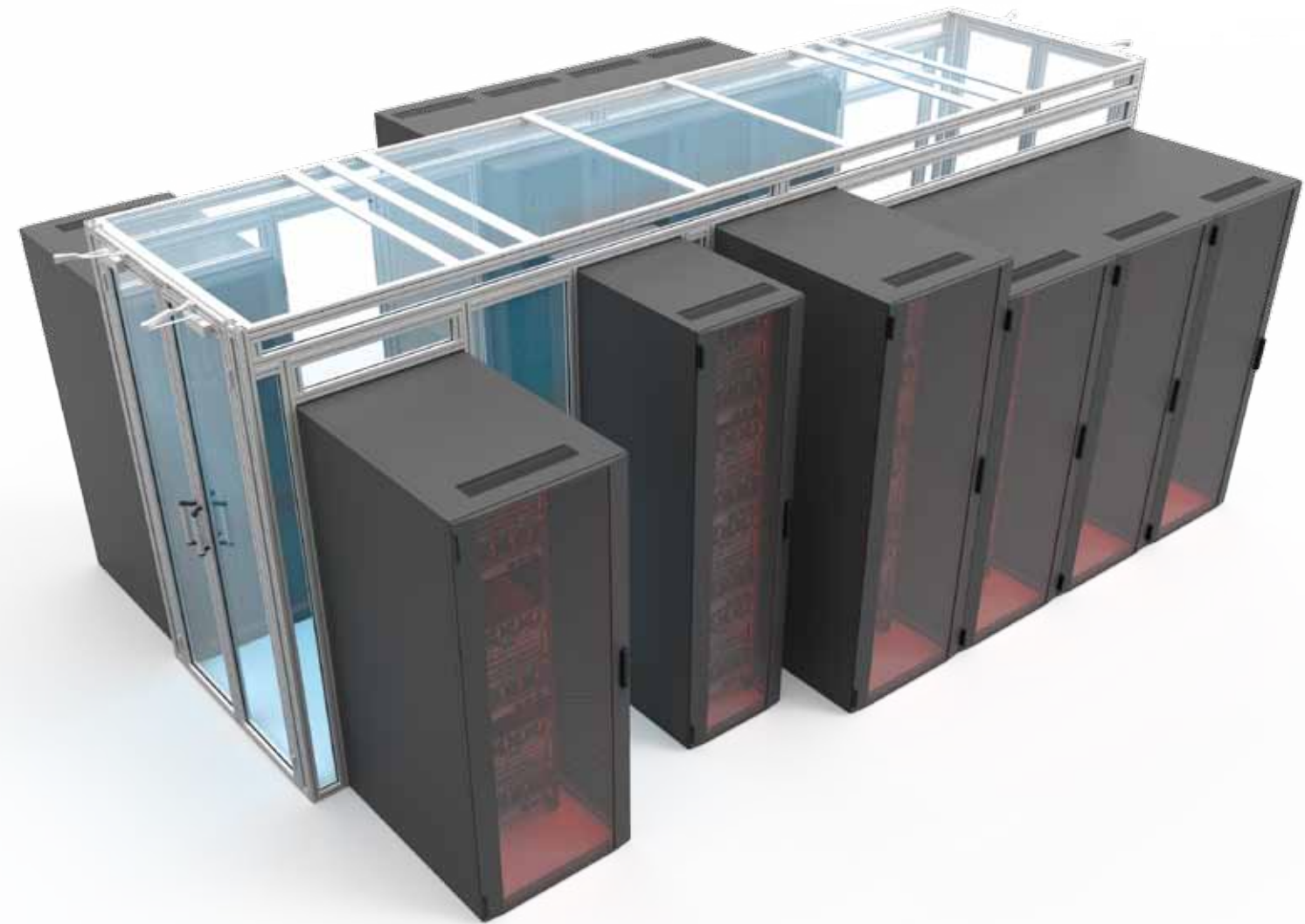
Translucent insert, airtight, suitable for cold and warm air separation.

Combination of mesh and airtight insert (for cages with integrated containments), can be subsequently amended.



# Containment solutions

Individual aluminum elements  
ensure secure containment  
of hot and cold aisles



If you operate a brownfield data centre which contains cabinets from various suppliers, our system allows you to contain the enclosures without buying new ones. You can even freely define the height in which we will place the top cover on the robust, custommade aluminum frame that will be mounted to the different cabinets.



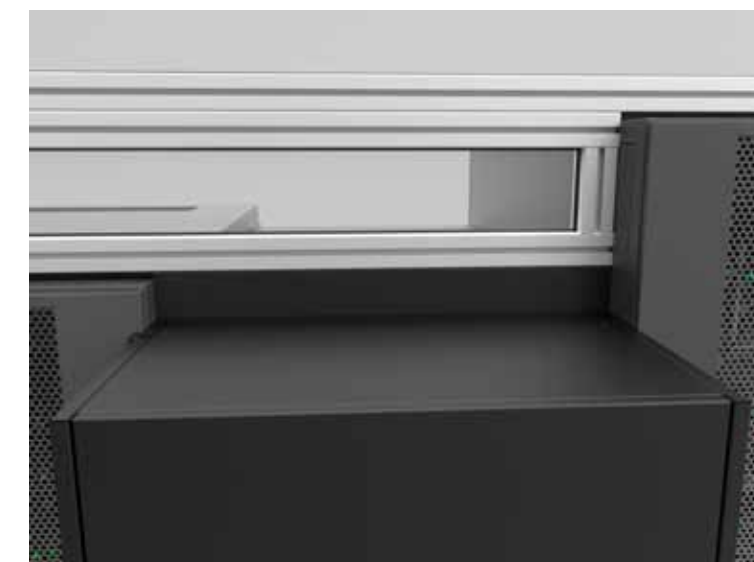


## Height differences

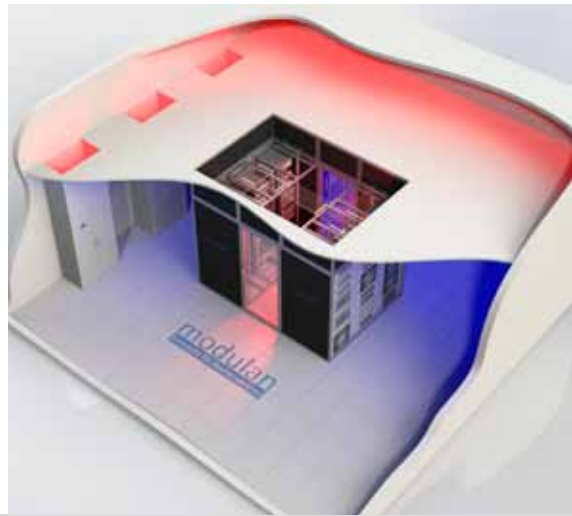
The possibilities are what counts!

## Gaps within a row

We also use our custom-made aluminum frames in case of gaps within a row or in case of rows of different length. The frames are mounted between the cabinets and provide a highquality climate barrier. This means, cold aisles are consistently separated from surrounding warm areas, and vice versa.



Thanks to a coordinated product range and countless design options, we are able to cater flexibly to the conditions and implement your requirements with a high level of quality.

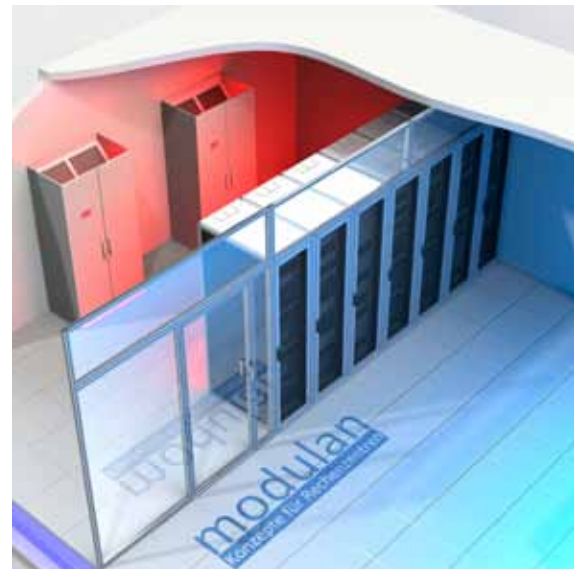


## Vertical containment

Vertically attached partition elements enable containment up to the ceiling. With warm aisle containment, this makes it possible to create a recirculation plenum for the cooling units with a hung ceiling. The airconditioning circuit in the data centre is thus closed without enabling the warm and cold air to mix.

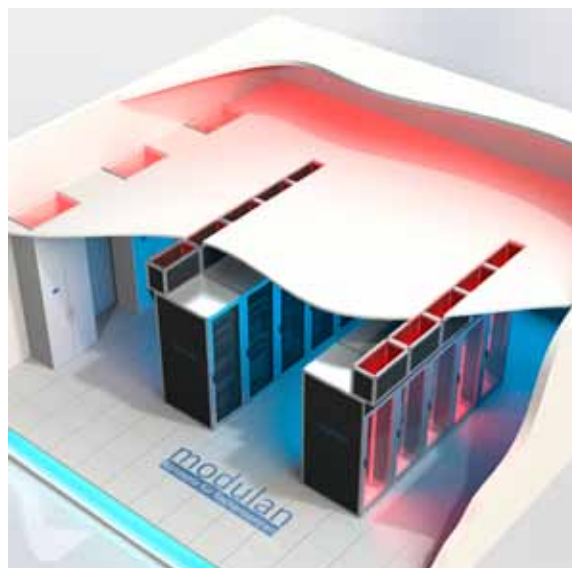
## Vertical containment used for partition

This solution is frequently used for computer rooms with only one row of cabinets. The vertical containment functions as a partition between the warm-air-area behind the cabinets and the cold-air-area in front of them. Independent of the type of air conditioning (raised-floor or in-row air-conditioning) the cooling system cools the air and leads it from the warm-air-area of the room to the cold-air-area in the front.



## Chimney systems

Each rack has its own chimney, which leads the exhaust air into the hung ceiling. The air conditioning, which is also connected to the hung ceiling, cools the exhaust air and recirculates it either into the raised floor or directly into the room.



## Flexible partition walls

Our flexible partition walls are an especially fast and flexible solution to roughly separate cold and warm air zones. Due to their low weight, these walls can be positioned freely in the data centre and, where required, set to the desired width with just a few hand movements. A rigid version without width adjustment is also available. All partition walls are naturally offered with the usual individuality in their external dimensions and range of materials.

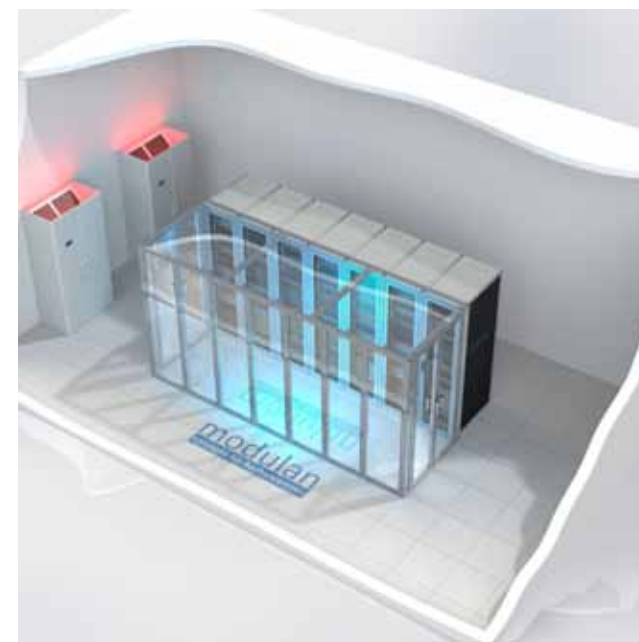


## Integrated containment

If there is little space available, integrated containment with containers fitted directly to the racks offers the ideal solution. Besides the low surface area, there is an additional advantage in that the cold air zones do not need to be accessed during maintenance work. Employees are thus exposed to fewer temperature fluctuations when working in the data centre.

## Single-row concepts

No matter whether small server rooms only consist of one row, a closure should be created for an uneven number of rows, or simply an island solution is required: we have the right solution ready with the one-row concept.





# Gut feeling or intellect?



With the right partner by your side, this no longer matters: we combine service, quality and cost-effectiveness!



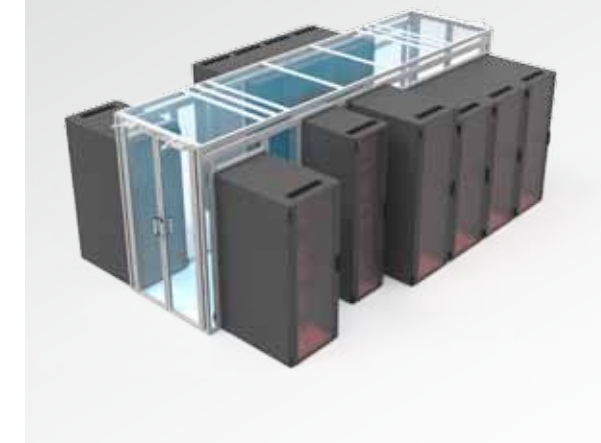
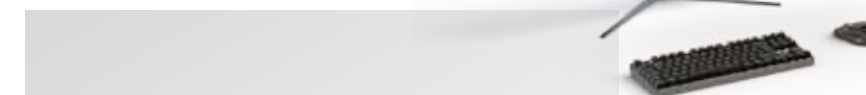
## Professional measurement

Equipped with the latest measuring technology, we take a reliable and error-free measurement of your data centre in the shortest time. Only a few minutes are needed per corridor without further questions cropping up later. The measurement is so detailed that even the smallest things such as pipes and cables are taken into account.



## Customised manufacturing

We leave nothing to chance: a precise 3D model of the housing is created first in dialogue with you. This allows you to ensure that everything meets your preferences, even before delivery. The components are then manufactured quickly in our modern manufacturing hall according to your requirements.



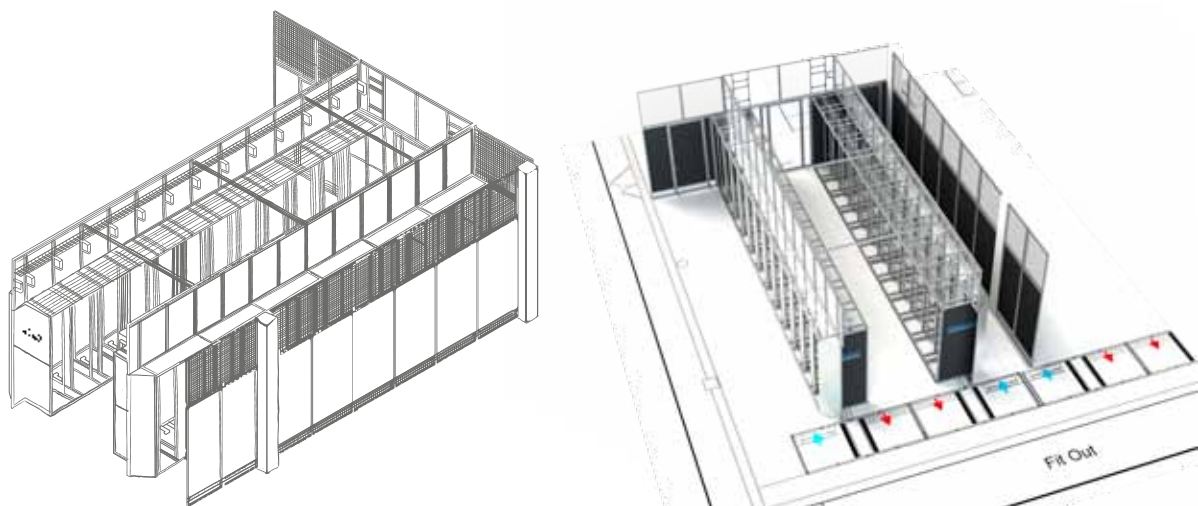
## Perfect final assembly

Our trained fitters complete the final assembly in no time. Service takes priority for us, and only when you are completely satisfied with everything do we consider our job done.



# Planning, design and manufacturing

You know best what your data centre should look like. All we need are simple outlines in order to understand what your requirements are. We use these requirements to create a finished concept. With the help of the latest visualisation tools, every step is documented professionally. In this way, we also ensure that you end up getting exactly what you imagined.



## Mobile containment

When heat problems occur, there is often little time to react appropriately. In addition, spatial conditions can make it difficult to implement containment, or planned renovation work in a row layout leads to delays in implementing cold aisle containment. In all these cases in which time is a critical factor, our newly developed mobile containment can provide assistance. Whether in standard dimensions or custom-made for special racks, the mobile containment units can be slid in front of any 19" cabinet without any problems. The cold air flowing from the raised floor is 'captured' in the containment frame and provided in sufficient quantities to the user in the rack. No warm air is able to penetrate at all.



Sealing on the ground using brushes



Sealing profiles next to the racks





**modulan GmbH**

Roemerpfad 5  
61130 Nidderau

Tel.: +49 (0) 6187 - 476 000  
Fax: +49 (0) 6187 - 419 0697  
E-Mail: [info@modulan.de](mailto:info@modulan.de)

[www.modulan.de](http://www.modulan.de)

# Interested?

Our professional and friendly advisers will be only too happy to help you. Ideally, arrange an appointment today.

