

A faster, safer, and more sustainable way to design and build spacious and user-friendly parking spaces



**PEIKKO SOLUTIONS FOR
PARKING CONSTRUCTION**

MORE SPACE – MORE VALUE FOR YOUR INVESTMENT

Rapid urbanization drives the growing demand for parking construction. Multi-story car parks with large numbers of parking spaces are an increasingly popular solution. Parking construction must fulfil the needs of various users. Besides fitting its purpose, a well-built car park stands the test of time in an environmentally friendly way.

Composite construction methods combined with prefabricated components represent an ideal alternative for underground car parks, for parking structures on the top of residential buildings and offices, and for parking decks near existing buildings. A minimum amount of columns with long spans and HVAC free ceilings allow for large open spaces.



MEET THE FUTURE PARKING CONSTRUCTION REQUIREMENTS WITH PEIKKO:

▶ Cost-efficiency

The best possible ratio of floor area to usable space. Meeting the fire protection requirements for columns and beams reduces maintenance costs and increases the safety of users.

▶ Sustainability

Lightweight, effective cross sections keep material consumption to a minimum using innovative technologies such as composite beams and columns. CO₂ emissions are minimized when combined with environmentally friendly building materials.

▶ Ease of use

The small number of slim composite or precast reinforced concrete columns make both parking and getting in and out of the car much easier.

▶ Flexibility

The architecture, size, facade, and ground plan of the car park can be designed to meet your individual requirements. The composite beams and columns and steel components are available in all RAL colors on request and with the necessary corrosion protection.

COST-EFFICIENCY

SUSTAINABILITY

EASE OF USE

FLEXIBILITY



LEADING SOLUTIONS IN TERMS OF QUALITY, SAFETY, AND SUSTAINABILITY

Recommended Peikko solutions for parking construction

By investing more than industry average in the research and development, we can offer you innovative solutions to make your parking construction process faster, safer, and more sustainable.

DELTABEAM® - SLIM FLOOR STRUCTURE FOR OPEN SPACES

Peikko's DELTABEAM® Slim Floor Structure is a flexible solution always tailored to the customer's needs. It enables slender and light structural solutions that provide savings in terms of volume and costs. Its composite action between steel and concrete allows for creative structures with large open spaces.

DELTABEAM® has an excellent fire resistance without any additional protection. Its shallow design decreases a building's floor-to-floor height while eliminating conflicts with HVAC systems.



Long spans



Flexible open space



Additional room height



Easy and space-saving HVAC installations



Integrated fireproofing



Suitable for all slab and column types

REDUCING CO₂ WITH THE DELTABEAM® GREEN

In addition to the existing benefits of DELTABEAM®, the DELTABEAM® Green has a much lower environmental impact than conventional steel structures and it reduces CO₂ emissions by up to 50%. Its environmental product declaration (EPD) certifies its environmental impact, allowing project CO₂ emissions to be calculated.

The environmentally friendly design of DELTABEAM® Green covers everything from the materials to the production process and from the certifications to the transport solution.

DELTABEAM® Green



Made from over 90% recycled materials.



More than 90% recycled raw materials



Material savings



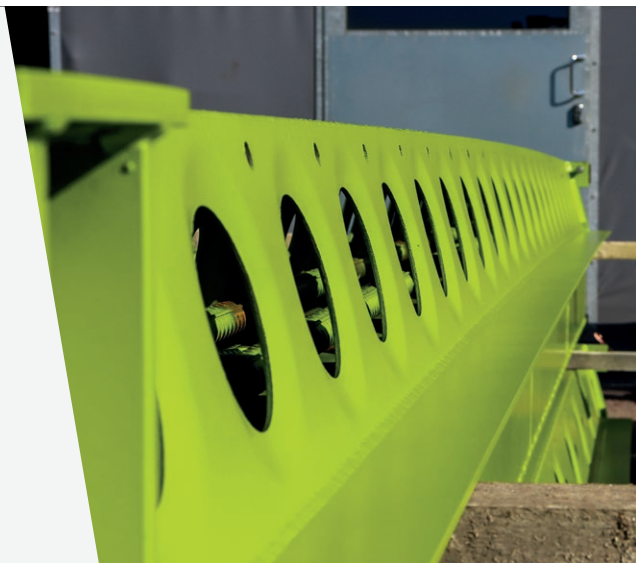
Renewable energy used in the production process



Greater compatibility: LEED and BREEAM, EPD



Up to 50% reduction in CO₂ emissions

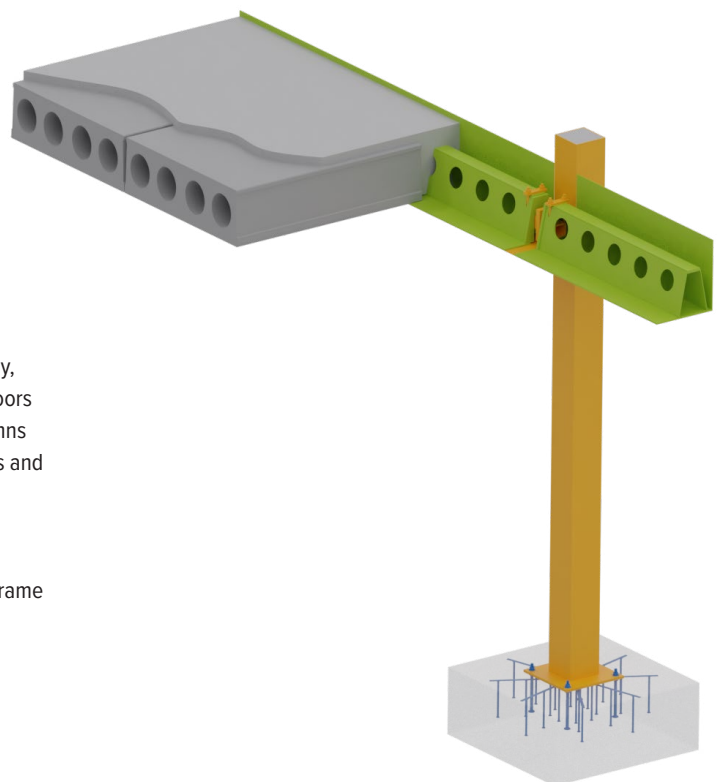


DELTABEAM® FRAME - COST-EFFECTIVE AND SLIM LIGHTWEIGHT STRUCTURES

**DELTABEAM® Frame
= DELTABEAM® composite beams
+ ATLANT® composite columns +
steel structures**

The DELTABEAM® Frame maximizes the space available in two ways. Firstly, the floors are slim, meaning that you will get more room height or more floors for a given building height. Secondly, solid core ATLANT® composite columns are slimmer than traditional, Eurocode-based standard composite columns and take up very little space. This translates into more floor area.

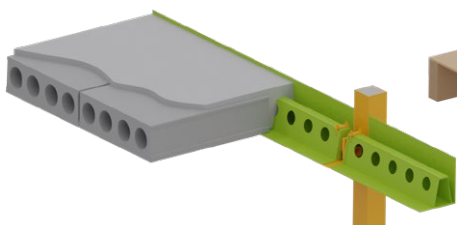
When you source the entire frame from a single supplier, your project becomes easier to manage – and you will ensure timely deliveries of the frame components.



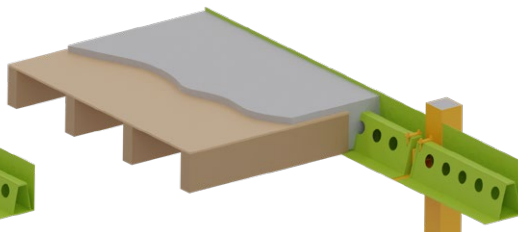
OPTIONS AND COMPARISON

DELTABEAM® CAN BE COMBINED WITH ALL THE COMMON SLAB SYSTEMS:

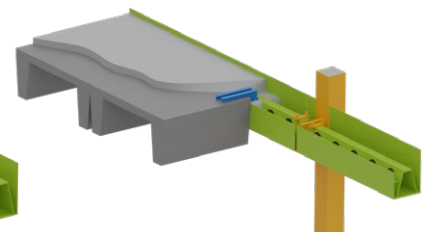
Prestressed concrete hollow-core slabs



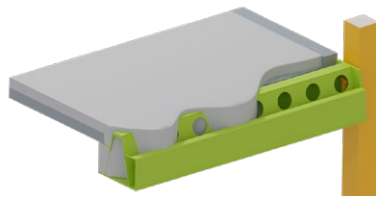
Timber-concrete composite slabs



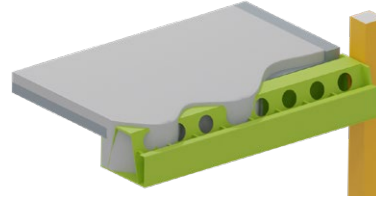
TT slabs



Prestressed semi-precast slabs



Non-prestressed semi-precast slabs



Benefits with different slab types

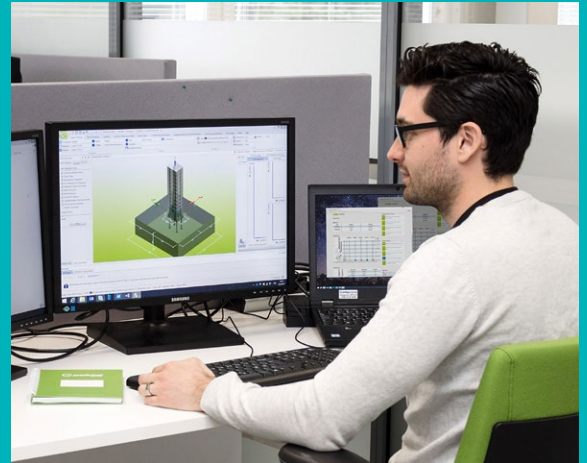
DELTABEAM® combined with:	Prestressed concrete hollow-core slabs	Timber-concrete composite slabs	TT slabs	Prestressed semi-precast slabs	Semi-precast slabs
Costs					
Construction time					
Floor thickness					
Column grid					
CO2 emissions/ sustainability					

PEIKKO DESIGN TOOLS

Our free and powerful software makes your work faster, easier, and more reliable. Peikko design tools include design software, 3D components for modeling programs, installation instructions, technical manuals, and product approvals of Peikko's products. We also offer cloud based BIM with Tekla Model Sharing.

Peikko for Designers

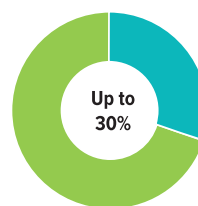
See all our solutions in
peikko.com/for-designers



PROVED SAVINGS IN SPACE, SPEED, AND SUSTAINABILITY - DELTABEAM® GAME CHANGER

The DELTABEAM® Game Changer is an efficient tool for establishing the life cycle savings potential of your construction project. This value calculation software developed by Peikko's experts offers both saving and return calculations of the structural solution, both in a visual form and in the form of reports.

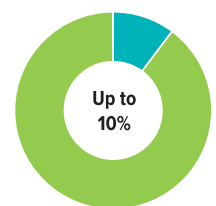
www.peikko.com/deltabeam-game-changer



Faster building time



More space for same money

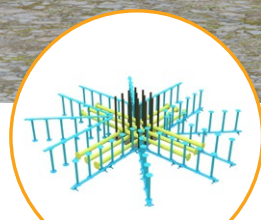


Less CO₂ emissions

Other solutions & how to connect



PCs[®]
Corbel



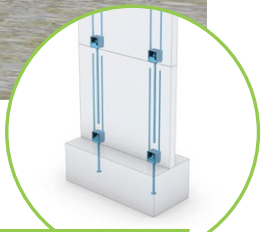
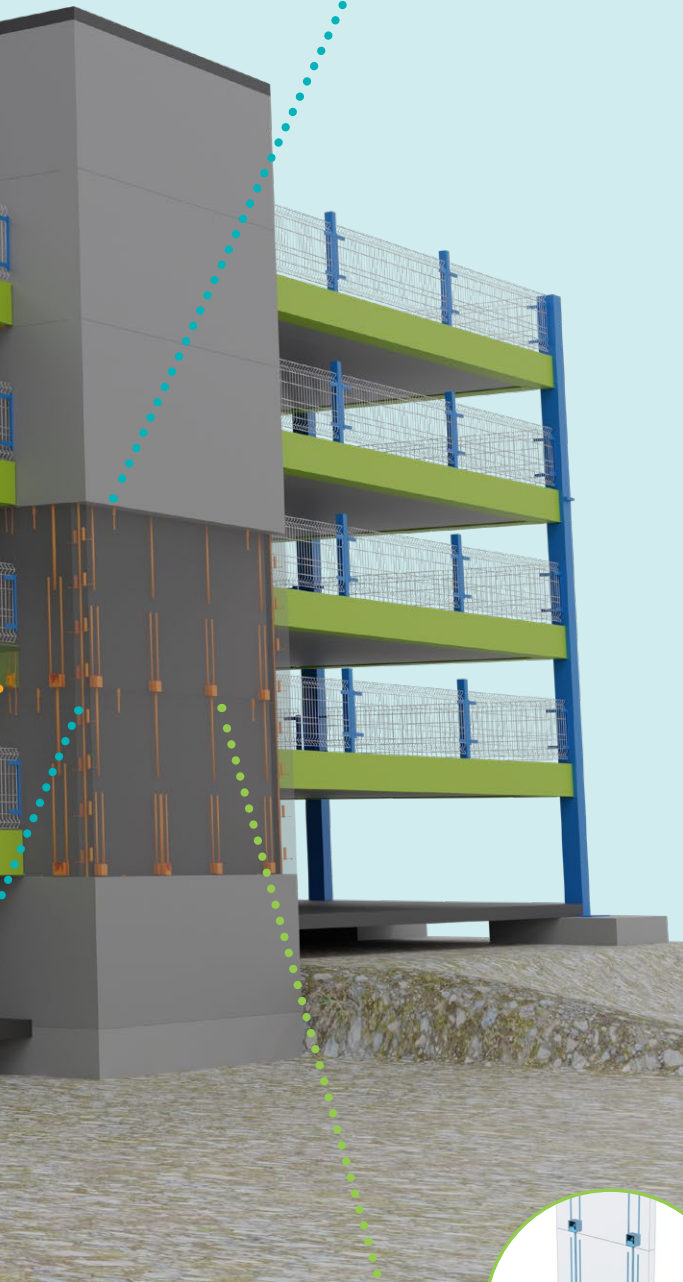
PSB[®] and PSB PLUS[®]
Punching Reinforcements



PVL[®]
Connection Loops



Anchor lifting and mounting systems



SUMO® Wall Shoe

Additionally, Peikko offers several high-performing product solutions that complement and support a faster, safer, and more efficient construction of parking spaces.

PCs® Corbel

The PCs® Corbel system for supporting beams enables to achieve maximum floor height and create visually appealing beam-column connections in residential buildings.

Anchor lifting and mounting systems

Peikko offers a wide range of lifting accessories for all types of lifting and transport tasks.

PSB® and PSB PLUS® Punching Reinforcements

The PSB® and PSB PLUS® Punching and Shear Rails offer simple and reliable solutions against punching shear failure and shear failure of slabs, foundations, walls and beams by increasing their resistance.

PVL® Connection Loops

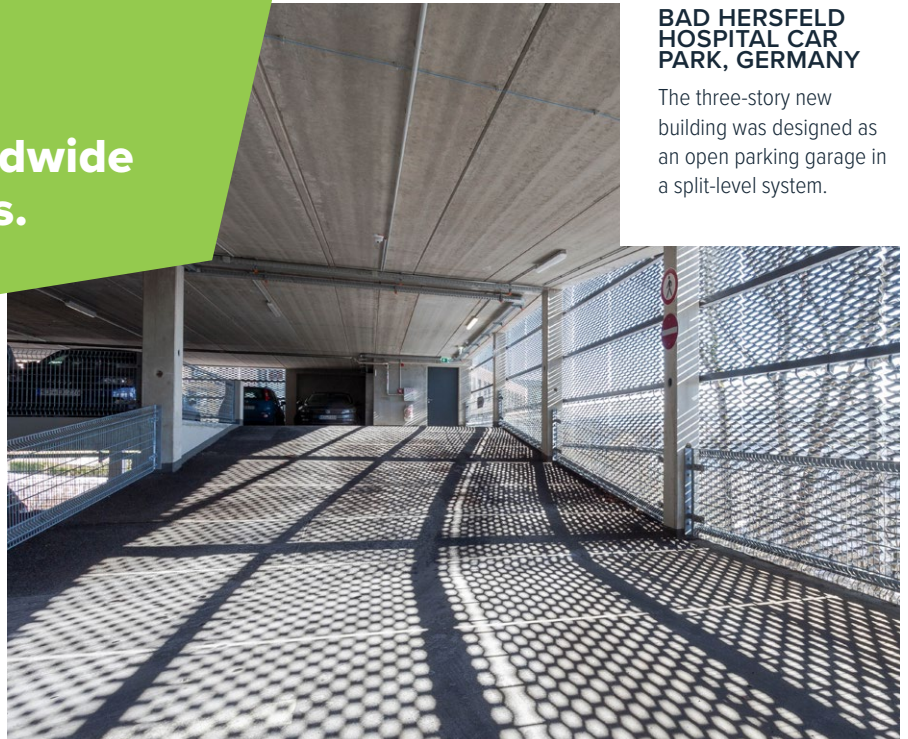
Single-wire loops used to connect precast wall panels to one another or to a column.

SUMO® Wall Shoe

The SUMO® Wall Shoes are used to create cost-effective tensile connections between precast concrete walls and foundations or between precast concrete walls.

PEIKKO PARKING CONSTRUCTION REFERENCES

More than 30 years' experience and over 15,000 projects worldwide speak for themselves.



BAD HERSFELD HOSPITAL CAR PARK, GERMANY

The three-story new building was designed as an open parking garage in a split-level system.

MULTI-STORY CAR PARK, MANCHESTER AIRPORT, UK

3,800-space multi-story car park which is part of the T2 upgrade at Manchester Airport.



MULTI-STORY CAR PARK SENFTENBERGER RING, BERLIN

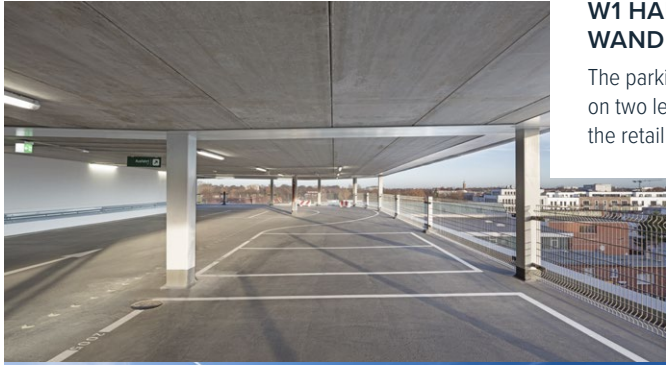
The multi-story car park is build just in 14 months.



LOODS 5 FURNITURE STORE, MAASTRICHT, NETHERLANDS

DELTA BEAM® Slim Floor structure with long spans created maximum open spaces and additional height, especially for the parking under the commercial stores





W1 HAMBURG WANDBEK

The parking deck is on two levels above the retail areas



BUS CENTER GLATTAL, SWITZERLAND



MULTI-STORY CAR PARK AT SCHÜTT HERZOGENAURACH



ASSENHEIMER HEILBRONN MULTI-STORY CAR PARK



PLAZA AT WAIKIKI, WAIKIKI, HI, USA

A senior living facility with two stories of parking.



BESTSELLER - VERO MODA - OFFICE COMPLEX, AARHUS, DENMARK

There is a three-story underground car park with space for 450 cars and about 400 bicycle racks.

DELTA BEAM® FOR YOUR CAR PARK



Be inspired online by projects realized with DELTA BEAM® Frames: www.peikko.com/deltabeam-references

 EXPERT ADVICE LOCALLY AVAILABLE

Peikko offers expert advice during both design and construction phases, making building parking spaces as safe as possible.

www.peikko.com



A faster, safer, and more sustainable way to design and build

Peikko supplies slim floor structures and connection technology for precast and cast-in-situ applications. Peikko's innovative solutions make your construction process more efficient.