

A faster, safer, and
more efficient way
to design and
build health care
facilities



**PEIKKO SOLUTIONS FOR
HEALTH CARE CONSTRUCTION**

ENABLING HEALTH CARE FACILITIES TO BE SAFE, WELCOMING, AND ADAPTABLE



It is challenging to design and build hospitals and other health care facilities. While the structure needs to be safe and all surfaces easy to clean and disinfect, the atmosphere still needs to be open, welcoming and warm.

Open design also makes the building easily adaptable for changing needs. However, designing open and safe spaces might mean a more complex structure. This is why we offer a wide range of both precast and cast-in-situ solutions for health care construction to make the facilities as safe and functional as possible without compromising the design.

THE ISSUES WE TACKLE WITH OUR SOLUTIONS:

VIBRATION

Delicate health care equipment is sensitive to vibration. With Peikko solutions, the weight and dimensions of the structure can be minimized thus controlling vibration.

LAYOUT ADAPTABILITY

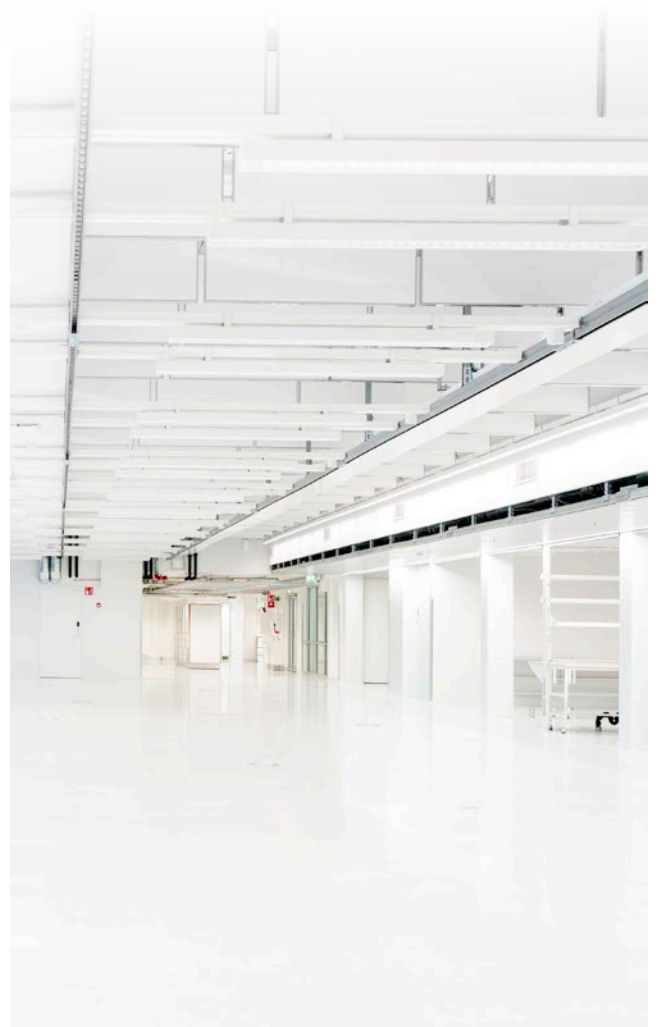
Large open spaces are needed. They need to be easy to clean and ensure a possibility for post construction alterations.

FIRE SAFETY

Fire protection solutions must be safe to health. We offer integrated and nontoxic fireproofing solutions that don't require maintenance.

HVAC INSTALLATIONS

HVAC installations take a big and important portion of health care facilities. With our slim floor solutions, the installations can be executed without disrupting the design and functionality.



WHAT CAN WE OFFER?

A combination of precast and cast-in-situ solutions.

THE BENEFITS OF CHOOSING OUR SOLUTIONS:

- Slimmer floors
- Less construction workers needed on site
- Less transportation and logistics needed which reduces CO₂ emissions
- Shorter construction period of the building due to:
 - prefabricated components and reinforcement
 - less safety precautions due to simple structure
 - less concreting work
- Significantly reduced overall carbon footprint



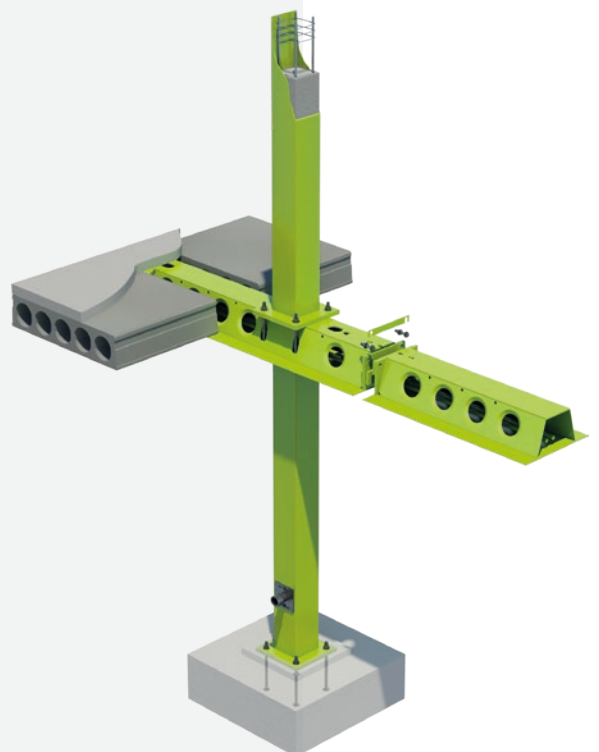
RECOMMENDED PEIKKO PRODUCTS FOR HEALTH CARE CONSTRUCTION

DELTABEAM® SLIM FLOOR STRUCTURE

DELTABEAM® Slim Floor Structure allows you to build open spaces – even with architecturally demanding shapes. Compatible with precast and cast-in-situ slabs as well as any type of columns, DELTABEAM® makes your construction process faster and more efficient.

DELTABEAM® BENEFITS IN HEALTH CARE CONSTRUCTION:

- Enables large open spaces and slim floors
- Integrated and nontoxic fireproofing
- Design support
- Proved solution with 30 years' experience
- Saves usable floor area when combined with DELTABEAM® Frame
- Ideal also for parking structures annexed to hospitals

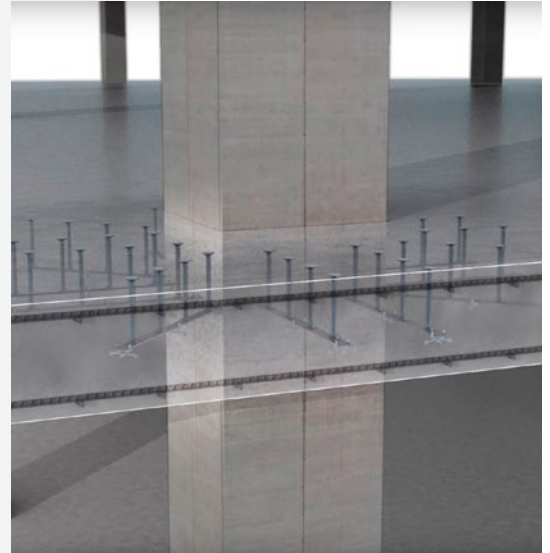


PSB® PUNCHING REINFORCEMENT SOLID PLATFORM FOR SENSITIVE OPERATIONS

PSB® Punching Reinforcement is an ETA approved system providing the highest resistance on the market. PSB® 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.

PSB® BENEFITS IN HEALTH CARE CONSTRUCTION

- Enables slimmer floors in vibration controlled areas
- Easy handling of high point loads of mechanical equipment like MRI
- Up to 200 kN more resistance with PSB PLUS®
- Simpler shear reinforcement of basement walls
- Less concrete and less work equals less CO₂



PETRA® SLAB HANGER HOLLOW CORE SUPPORT FOR SLAB OPENINGS

PETRA® Slab Hanger is used to support hollow core slabs and make openings and configurations into the hollow core slab floors. PETRA® is a unique technical solution that has all the benefits of a standardized product, while being used for applications that usually require careful static analyses and tailor made structural solutions.

PETRA® BENEFITS IN HEALTH CARE CONSTRUCTION

- Painless and firesafe openings to hollow core slabs
- Installation does not need propping
- Easiest way to build fireproof HVAC penetrations through slim floor

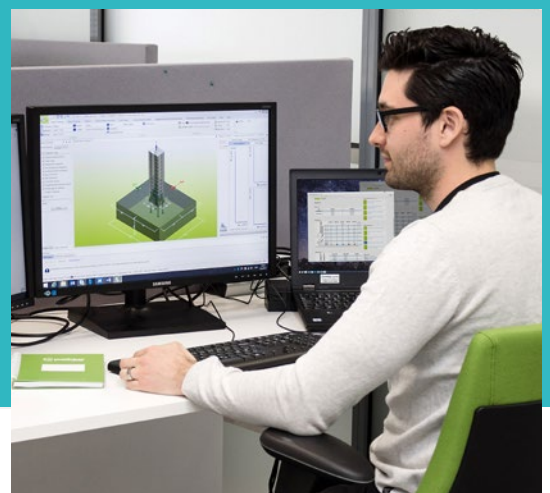


PEIKKO DESIGN TOOLS

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



PEIKKO HEALTH CARE REFERENCES



SILTASAIRAALA, HELSINKI, FINLAND

The Hospital District of Helsinki and Uusimaa, HUS, has started construction work for a new hospital building, called Bridge Hospital, in Helsinki, Finland. Peikko is one of the key partners of this project. The hospital, opening in 2023, is the hospital district's largest investment to date and also Peikko's largest individual DELTABEAM® project.

PROJECT FACTS

Project size: 68,700 m²

Developer: HUS Hospital District

Construction Company: SRV Rakennus Oy

Structural Designer: A Insinöörit Oy

Architect: Team Integrated

Delivery year: 2018 2020

Completion year: 2023



AMC HOSPITAL, RIYADH, SAUDI ARABIA

AMC Hospital for long term patients comprises of 2.2 kilometers of Peikko's DELTABEAM®, special fastening items, special wall shoes and anchor bolts.

PROJECT FACTS

Project size: 25,000 m²

Developer: Anfas Medical Care

Construction Company: C&P Construction and Planning Co. Ltd.

Structural Designer: Arabtech Jardaneh and Partners for Engineering Consultancy / AJ Saudi

Architect: Arabtech Jardaneh and Partners for Engineering Consultancy / AJ Saudi

Precaster: AlRashid Abetong

Delivery year: 2017

Completion year: 2018



DENTAL PRACTICE BENEDENTI, HERENTALS, BELGIUM

The 4-story high precast columns of the new dental practice Benedenti in Herentals, Belgium were erected quickly and support free with the use of Peikko's column shoe system.

Project facts

Floors: 4

Developer: Benedenti Groep

Construction Company: Mathieu Gijbels

Architect: D&A Architectenbureau

Delivery year: 2017

Completion year: 2018



COUNTRY HOSPITAL, THORSHAVN / FAROE ISLANDS, DENMARK

The Country hospital in Thorshavn on the Faroe Islands, was expanding with an additional hospital building of 14,500 m². DELTABEAM® Composite beams were an obvious choice for construction. The builder wanted a slim floor solution, to make the floor height as low as possible.

PROJECT FACTS

Project size: 14,500 m²

Floors: 5

Construction Company: MT Højgaard, Færøerne

Structural Designer: LBF Rådgivende ingeniører (andet på Færøersk)

Architect: FAERPORT II Árni Winther Arkitektar

Precaster: Contiga Tinglev

Delivery year: 2017-2018

Completion year: 2020

CAPELLA LABORATORY, CAMBRIDGE, UK

A 700 mm deep and extremely heavy cast-in-situ floor structure was originally specified to support delicate laboratory equipment sensitive to vibration. With DELTABEAM®, the overall thickness was reduced by 200 mm.

PROJECT FACTS

Location: Cambridge, UK

Architect: Fairhursts Design Group

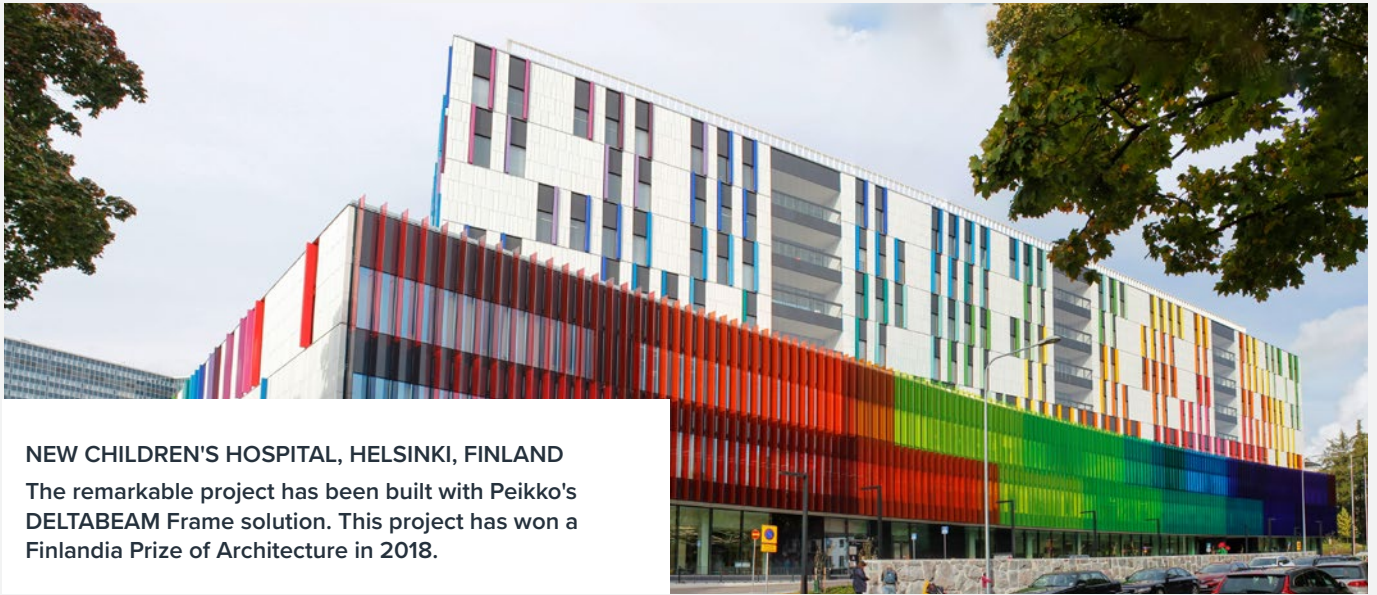
Main Contractor: Kier Group

Specialist Structural Frame

Contractor: PCE Ltd.

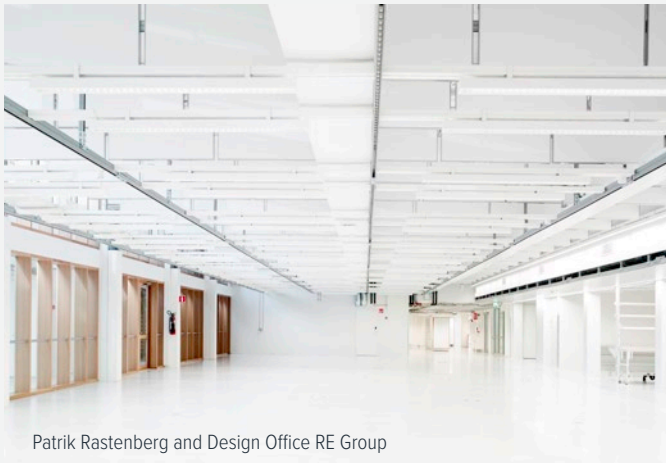
Consulting Engineers: Arup





NEW CHILDREN'S HOSPITAL, HELSINKI, FINLAND

The remarkable project has been built with Peikko's DELTABEAM Frame solution. This project has won a Finlandia Prize of Architecture in 2018.



Patrik Rastenberg and Design Office RE Group

HUSLAB LABORATORIES, HELSINKI, FINLAND

The geometrically convoluted frame, designed for a cramped plot, consists of Peikko's Composite Frame solution combined with cast-in-place concrete structures of the underground floors.



NEW GENERATION HOSPITAL, BRATISLAVA, SLOVAKIA

Slim floors with Peikko PSB® punching reinforcement, anchoring by welding on Peikko WELDA® anchor plates.



EXPERT ADVICE LOCALLY AVAILABLE

Peikko offers expert advice during both design and construction phases, making building of health care facilities as safe as possible.

www.peikko.com



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A faster, safer, and more efficient way to design and build. Peikko supplies slim floor structures, wind energy applications and connection technology for precast and cast-in-situ construction. Peikko's innovative solutions make your construction process more efficient.