

Underfloor Heating for Multi-Family Buildings

Cost-effective. Energy-efficient. More attractive.





Underfloor heating for multi-family buildings

Efficient heating

Choosing hydronic underfloor heating for a multi-family building is a smart investment – both financially and in terms of energy efficiency. Because underfloor heating distributes heat across a large surface area, rooms can be heated using a low supply temperature. The indoor temperature can also be reduced while maintaining the same level of thermal comfort, helping to reduce energy consumption.

Today, underfloor heating is an established choice in single-family homes. In the future, it is set to become just as natural a choice for multi-family buildings.

Efficient and easy installation

Because underfloor heating manifolds are normally positioned centrally and serve larger floor areas, fewer heating risers may be required compared with a conventional radiator installation.

Heating risers and underfloor heating manifolds can also be located in the building's stairwell, providing convenient access for future inspection and maintenance.

Once the underfloor heating system has been installed, the heating installation is essentially complete. This also reduces the risk of damage to finished wall surfaces compared with radiator installations, where radiators may be

fitted after painting and finishing work has been completed.

Reduced risk of leaks

All connections are concentrated at the underfloor heating manifold inside a cabinet with a watertight base. This minimises the risk and potential consequences of leakage compared with radiator systems, where connections are distributed throughout the building.

This is particularly important in apartments with sensitive floor finishes such as parquet, where even a small leak from a radiator connection can result in costly water damage.

- Suitable for all floor types and building constructions
- Energy-efficient, low-temperature heating
- More even and comfortable heat than radiator systems
- Greater architectural and interior design freedom
- A better heating option for allergy sufferers
- Good heating economy and improved energy performance





Underfloor heating enhances comfort and property appeal

Architectural freedom

Underfloor heating gives architects greater freedom to realise their design vision. With the heating system concealed within the floor, there is no need to accommodate radiators in front of windows or in locations that compromise the architectural concept. Visible heating pipes on walls are also eliminated.

Underfloor heating manifolds can be concealed behind access hatches designed to blend seamlessly into the surrounding wall finish.

Greater comfort and residential appeal

Underfloor heating can make an apartment more attractive on the housing market. Residents appreciate the high level of comfort and the sense of everyday luxury that a warm floor provides.

With no radiators to work around, residents also have greater freedom when furnishing their homes. Cleaning becomes easier too, with fewer exposed heating surfaces where dust can accumulate.

Optimise your building projects

Support throughout the entire process

As an HVAC consultant, you can rely on LK's more than 40 years of experience in underfloor heating. We are happy to share that expertise to simplify your work and help ensure a successful project outcome.

Our experienced sales team can support you throughout the process – from the first concepts and early system design documentation to completed construction documents.

And our support does not end there. To help ensure correct installation, LK offers project start-up meetings with the parties involved. Together, we highlight critical installation details and key process stages to help achieve the high level of quality expected by the client.

The goal is simple: a smooth installation process and a high-quality end result.

AMA specification texts

Specifying LK products is straightforward. AMA specification texts are available for download at lksystems.se.

Calculations

LK provides project-specific pressure-drop and flow calculations to support correct system design and hydraulic performance.

Installation proposals

LK prepares installation proposals that can form the basis for tender documentation or construction documents.

Consultation

LK offers practical expertise throughout your project. Your LK representative is always close at hand and ready to act as a technical sounding board.

Project start-up meetings

To help ensure correct installation from the outset, LK can participate in project start-up meetings to provide training and highlight critical installation requirements.



Systems designed for multi-family

Solutions for different building constructions

Building structures can range from traditional cast-in-place concrete to entirely timber-based constructions. That makes it essential to have different installation solutions available for the underfloor heating system.

LK offers several systems, each with specific characteristics suited to different applications. Of our 11 underfloor heating systems, we have selected the six solutions best suited to multi-family buildings. They all have one thing in common: they are proven solutions developed and adapted for the Nordic market.

Want to explore the other systems? Contact your LK representative and we will help you find the right solution for your project.



Raised floor construction

In raised floor constructions, the underfloor heating system can be integrated directly into the floor panel. With LK HeatFloor 22, the underfloor heating adds no additional build-up height.

LK HeatFloor 22 meets the stringent requirements of the Nordic Swan Ecolabel, and the construction has also been tested and verified by RISE.



LK HeatFloor 22 installed on timber joists

The conventional chipboard flooring is replaced with the grooved LK HeatFloor 22 chipboard panel.

Once the panels have been installed, heat distribution plates are fitted to ensure even heat distribution across the floor surface. The underfloor heating pipes are then laid in the grooves before the system is covered with the selected floor finish.

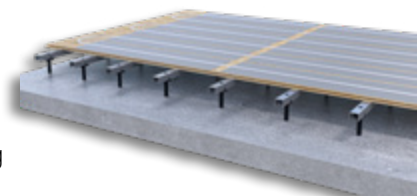


LK HeatFloor 22 installed on Granab

LK HeatFloor 22 is also ideally suited for installation on Granab's floor joist system.

The Granab system is secured to the structural floor, creating a cavity that can be used for pipes and other building services.

Granab's floor joist system is type-approved by SP and has Norwegian technical approval from SINTEF covering sound insulation, dynamic loading and strength. Together, Granab and LK HeatFloor 22 provide a proven solution that has been used in several of Sweden's tallest buildings.



Semi-Precast slabs / Cast-in-Place concrete / HDF Floor Slabs

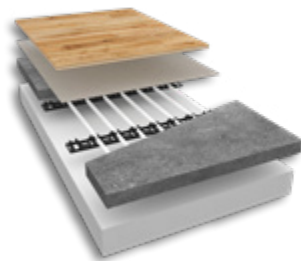
With semi-precast slabs, cast-in-place floor slabs and HDF floor slabs, underfloor heating pipes can be cast directly into the structural concrete.

The key advantage is that the underfloor heating system adds no additional build-up height. The floor slab will normally need to be insulated to help ensure a comfortable indoor climate throughout the building.

LK Clip-Rail Combi 16/20

Ideal for underfloor heating installations embedded in concrete.

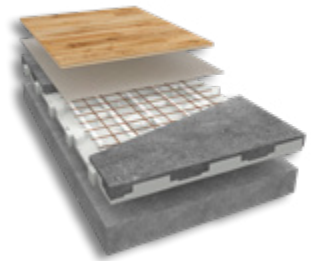
The clip rail is fixed using a nail gun, after which the pipes can be installed easily according to the designed c/c spacing. Once the pipes are in place, the concrete is cast.



LK System Board 30

Suitable for two-layer concrete casting.

The system plate acts as a pipe holder while also providing insulation to reduce downward heat loss to the floor below.



Systems for load-bearing floors

For load-bearing floor constructions, LK offers two systems particularly well suited to this type of application.

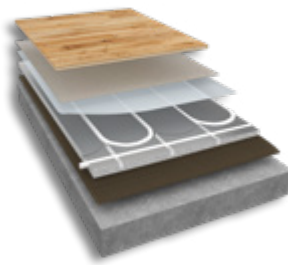
Both consist of boards installed on top of the load-bearing structure and provide insulation against downward heat loss. One of the systems is also available with impact sound-reducing properties.

LK CombiBoard EPS

LK CombiBoard EPS consists of an EPS S300 insulation board with a laminated heat distribution layer for optimal heat spread.

Available in thicknesses of 14, 18, 30, 50 and 70 mm, it is suitable for many types of floor finish. Ceramic floor finishes in dry areas can be installed directly onto the boards.

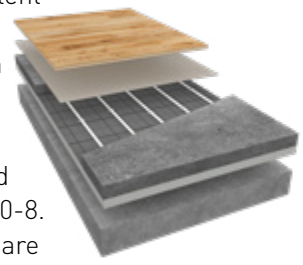
The EPS boards feature pipe grooves and integrated return grooves.



LK Foil Board Silent

Designed for underfloor heating in dry areas, LK Foil Board Silent is a robust system based on a 30 or 50 mm EPS insulation board with impact sound-reducing properties.

The foil board has been tested in accordance with EN ISO 140-8. The underfloor heating pipes are embedded in self-levelling compound before the selected floor finish is installed.



Reducing climate impact

EPDs provide transparency on environmental impact

The climate impact of underfloor heating can be lower than that of radiator systems, depending on the installation and system design. This insight is based on calculations using Environmental Product Declarations (EPDs).

Sustainability is an important priority for LK, and we were early adopters of EPDs for our products. Today, EPDs are available for a large proportion of our installation range.

An EPD is an independently verified environmental declaration that provides transparent information about a product's environmental impact throughout its life cycle. It includes product data, process descriptions, the methodology used for the life-cycle assessment and the resulting environmental impact data.

Our EPDs are reviewed and verified by an independent third party and follow internationally recognised standards and calculation rules.

A more energy-efficient heating system

Water-borne underfloor heating is already widely used in single-family homes and is becoming increasingly common in multi-family buildings.

Depending on the system design and installation method, underfloor heating can have a lower climate impact than radiator heating. Combined with a heat pump, a water-borne underfloor heating system can also provide more useful heat per kWh of energy consumed than a radiator system. LK's current multi-family building guidance specifically highlights this efficiency advantage.

With the potential for lower operating costs, reduced climate impact and greater indoor comfort, water-borne underfloor heating is a compelling heating solution for modern residential buildings.

LK has invested significant time and resources in embedding sustainability throughout our organisation. Today, sustainability is considered throughout our work, helping customers make secure, responsible and long-term choices.

Contact us to learn more about LK's sustainability initiatives and how they can add value to your project.

LK Underfloor Heating with a Cool Bonus: Underfloor Cooling

Multi-family buildings with underfloor heating embedded in the floor slabs can offer an additional benefit: the same system can also be used to distribute comfort cooling.

During the heating season, the system distributes heat. During spring, summer and autumn, it can instead be used to distribute cooling through the floor.

Where the building uses a ground-source heat pump, there are additional advantages. The boreholes can be used to provide what is commonly known as free cooling or passive cooling.

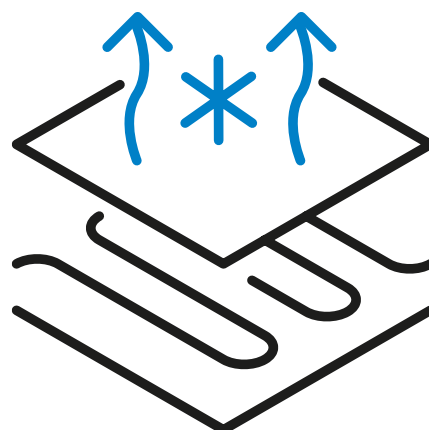
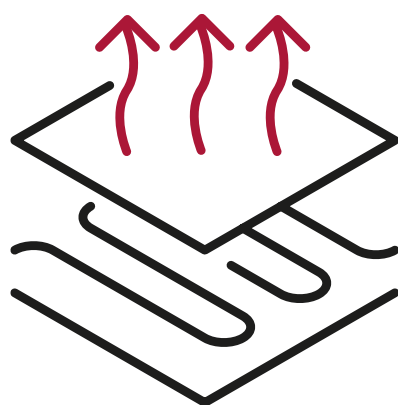
Operating costs for this type of cooling are very low, as essentially only the circulation pump requires electricity during operation.

There is another benefit. When the building is cooled, heat is transferred back into the borehole. This can improve conditions for the ground-source heat pump when the heating season begins again.

To enable free cooling, the control system must be supplemented with the appropriate cooling control equipment.

Warm floors in winter. Pleasantly cool floors in summer.

An unexpected bonus from LK Underfloor Heating.



HVAC installations designed to stay out of sight

LK Manifold Cabinet

LK Manifold Cabinets for heating and tap water conceal the installation while providing straightforward access for inspection and servicing whenever required.

Our installation cabinets are available in a wide range of standard configurations and can also be customised to suit the specific requirements of individual projects.

- Watertight base with leakage indication
- Suitable for recessed or surface-mounted installation
- All connections in one accessible location



LK Hatch HIDDEN

Our extensive range of access hatches meets the industry's high requirements for design, accessibility and compliance.

LK Hatch HIDDEN is designed to blend seamlessly into its surroundings, becoming a discreet and natural part of the interior. Designed with architects in mind.

Its smart magnetic locking system combines a discreet appearance with quick and easy access to concealed installations.



IsoMax meets increasing energy-efficiency requirements

Fully insulated risers – all the way

The design of the LK Riser Manifold IsoMax enables optimum insulation of the building's heating risers by positioning the manifold separately from the risers.

In the standard configuration, pipe insulation up to class R4 can be installed on the risers while maintaining full functionality and complying with applicable industry standards.

Multi-family buildings with demanding energy-performance requirements are becoming increasingly common, particularly in projects targeting environmental certification.

Whether for a new-build or renovation project, IsoMax is an excellent choice.

- **A unique solution**

LK IsoMax has been developed specifically for multi-storey buildings. Because the riser is positioned outside the manifold cabinet, the design does not restrict the thickness of the pipe insulation.

- **Cost efficiency**

LK IsoMax supports energy-efficient system design by enabling continuous, maximum pipe insulation. Its high degree of prefabrication also provides a rational installation process with fewer on-site work stages.

- **Uppfyller Branschkraven**

Designed to comply with applicable Swedish industry requirements, including **Safe Water Installation 2026:1** (Säker Vatteninstallation 2026:1) and **Industry standard: technical insulation** (Branschstandard Teknisk Isolering).



Digital Services

Individual room control

LK Arc is an optimised room control system that provides comprehensive control over comfort and functionality. The central unit, sensors and thermostats can communicate wirelessly, via wired connections or in a combination of both.

Visible components are available in discreet, selectable designs, making LK Arc easy to integrate into virtually any interior.

Connected freedom with the MyLK app

With the MyLK app, residents and property owners can stay connected to the underfloor heating system via smartphone or tablet.

Temperatures can be adjusted room by room, making it easy to achieve the desired level of comfort while maintaining efficient control of the heating system.

MyLK is also used with LK CubicSecure to detect leaks and monitor water flow, and with LK Metrix to save and analyse flow measurements taken externally on the pipe, directly on a mobile device.

Building automation with the LK IoT Portal

The LK IoT Portal brings connected LK products together in one place, providing a clear overview and enabling remote monitoring and control. LK Arc can be used to control heating for optimum comfort and energy efficiency, while LK CubicSecure can monitor water flow and detect water leaks.

Connect systems with Modbus

Using Modbus TCP/IP, LK Arc can be integrated with the building automation system for intelligent monitoring and control. This enables real-time system visibility and can contribute to lower energy costs.

API for professional integrations

LK provides a secure, cloud-based API for approved partners who want to integrate LK Arc and LK Cubic into their own services. The API can be used to retrieve data, receive alarms and, in certain applications, control connected devices. **API access requires approval and connection to LK's cloud platform.**

Reference Projects

From smaller housing associations to major developments such as Karlatornet in Gothenburg, LK supplies underfloor heating solutions for multi-family projects of every scale. Underfloor heating is rapidly becoming as natural a choice for multi-family buildings as it already is for new single-family homes.

Whatever the size of the project, LK has a solution. With the potential for lower operating costs and greater indoor comfort, underfloor heating can create value for property owners while making apartments more attractive to the people who live in them. We help make your project warmer, more comfortable, more attractive and more energy-efficient.

Skurup, Brf Väduren

“Vi We chose underfloor heating because a low-temperature heating system throughout the building is more energy-efficient. I also find that underfloor heating provides greater comfort while using less energy.”

Håkan Willhelmsson, Skurup AB.



Stockholm, NewYork

“We chose underfloor heating for the project to create that sense of luxury. The apartments have large glazed areas, so architecturally it also looks much better without radiators. Another major advantage is the significantly lower supply temperature, which reduces energy consumption.”

Alexander Ekberg, MSc Engineering, CEO, KI Rör AB.

Kalmar, Brf Tampen

“We have always been very satisfied with our collaboration with LK. The products and solutions are straightforward, flexible and efficient to install. In this project, we are using a complete heating and water solution, and everything – from communication and delivery to installation – has worked extremely well.”

Niklas Moberg and Magnus Medrin, Calmarsunds VVS.



Göteborg, Karlatornet

“Karlatornet chose underfloor heating for its comfort and architectural benefits. With the building’s large glazed areas, we wanted to avoid visually intrusive radiators.”

Bosse Strand, Department Manager, Bravida HVAC, Gothenburg.



Complete solutions for every need



Underfloor heating

Water-borne underfloor heating for multi-family buildings is a smart investment in both energy efficiency and long-term operating economy.



Water safety

LK CubicSecure helps protect properties against water damage. The system monitors water flow in real time and detects water leaks immediately.



Tap water systems

The LK Universal range is a complete tap water system comprising pipes, installation components, installation cabinets, manifolds, fittings and valves.



Snow melting

LK Snow Melting provides an effective way to reduce slip hazards, improve accessibility and reduce the need for winter snow and ice clearance.



Flow measurement

LK Metrix measures flow externally on the pipe, eliminating the need for measuring valves.



Water meter brackets

LK Water Meter Brackets are available in a wide range of configurations to meet the requirements of different properties and installations.



Water metering

LK CubicMeter is a connected water meter that measures hot water consumption in each apartment.



Pre-insulated pipe systems

LK Maxitherm is an energy-efficient pre-insulated pipe system for all types of properties.

Making everyday life simpler and smarter



At **LK**, we believe there is always a better way. That is why we challenge complexity with simplicity and drive innovation across everything we do – from heating, tap water and hydronic systems to pipe extrusion. This approach shapes every product, system and solution we develop, helping professionals create reliable, efficient and future-ready installations.

LK Systems is a leading Nordic provider of solutions for heating and tap water systems. Our systems

are designed to make installation simple, efficient and reliable. At our prefabrication facility, we also manufacture customised solutions that reduce on-site installation time and simplify even complex projects.

From system design and prefabrication to installation and long-term support, we are with you every step of the way – delivering smart, reliable and energy-efficient solutions for today's buildings and tomorrow's needs.



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