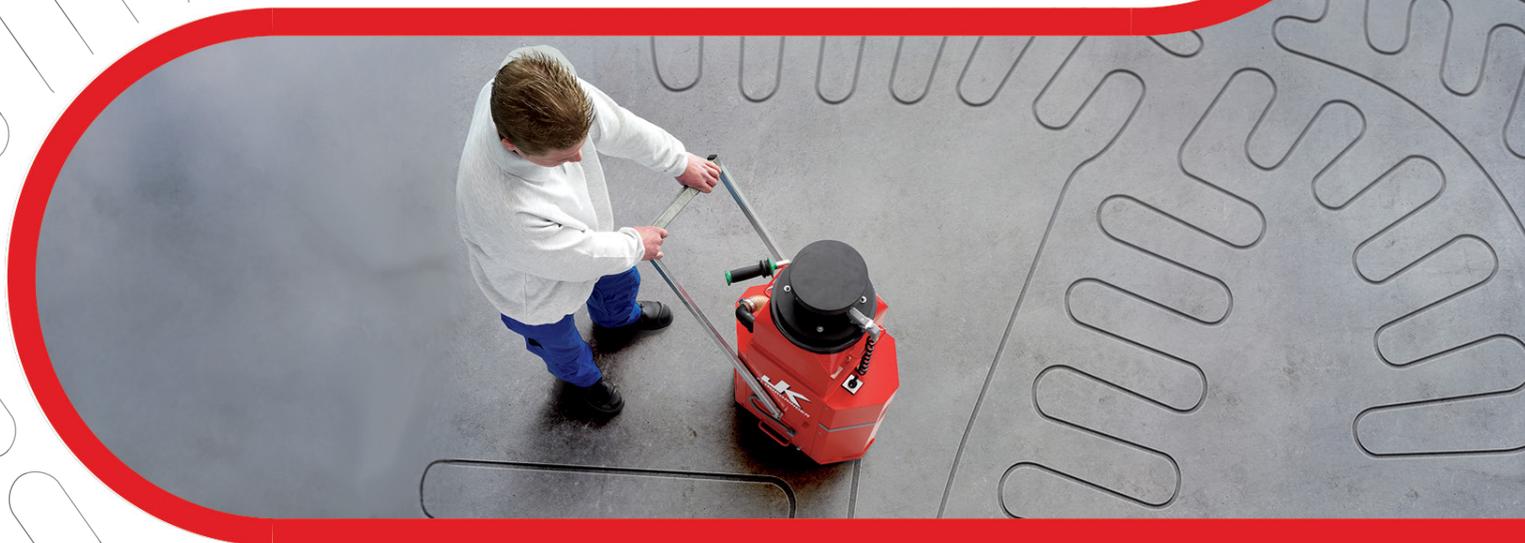




floorheating

JK[®] Floorheating

Underfloor heating professionals



Seamless integration of old and new floor constructions, providing quicker response times and suitable with all floor finishes



www.jk-gb.com



WHY THE JK® SYSTEM?

- **Single heating system:** the only and primary heat source
- **Zero build-up:** embedded into solid-floor
- **Bespoke:** custom floor cutting on site
- **Efficient:** uses very low water temperatures
- **Affordable:** no sub-floor work needed
- **Quick:** many installations take one working day
- **Dust free:** channels are cut virtually dust free
- **Responsive:** feel the warmth within minutes
- **One party:** trained in-house engineers fit the entire JK® system

JK® GROUP INVENTION TO INNOVATION

Janssen & Krop vloerverwarming B.V. was founded in 1994 and became the foundation for the later formed, larger and globally active JK® group. It all started in a barn from which the entrepreneurial duo worked primarily with the 'tile-industry'. This developed over the years into a professional corporation with its own branches, patented equipment and machinery, as well as tested and approved heating systems. Going on to collaborate with hundreds of industry partners in and outside of Europe, today, supply and installation of the JK® system is the core business of the JK® organisation.

We have the knowledge, expertise and experience to bring you a quality customised solution, no matter whether you are renovating, refurbishing, or starting a new building project in residential or commercial building. The JK® group has a customised solution for every place and project.

1 SUBFLOOR

The JK® system was invented in 1994, and the use of its patented machinery and installation method are now widely recognised as one of the most innovative ways to install a warm-water (hydraulic) underfloor heating system retrospectively. The first step of the installation process uses our patented JK® floorgrinder to create 15x16mm channels into existing floor structures. The JK® system is compatible with sand-cement screed, concrete or anhydrite floors, as well as existing tiled or suspended flooring constructions*. The JK® floorgrinder creates tightly routed, bespoke patterns into which heating pipes are inserted, for a virtually dustless operation.



**For suspended flooring constructions, we have developed the JK® LogiDeck. This dry-solution utilises floor elements from Thermal Economics and allows for a customised installation that incorporates key features such as heating, acoustics and fire protection all in one solution. For more information, speak to your JK representative.*

2 INSTALLATION PROCESS

Our heating pipe, the JK® flextube, is then laid into these channels which sit directly below the floor finish. As the JK® method uses a specifically designed set of equipment, all with on-tool extraction (LEV) that is compatible with 99% of all floor surfaces, it is not necessary to remove or raise the existing floor levels.

Once the pipes are inserted into the created channels, there is the option to apply a backfill. The JK® flexseal is a uniquely developed product, sealing the floor to remove any airgaps, and creating the perfect layer for any further products – such as smoothing and levelling compounds, or flooring products such as tiles and wood – to be applied on.

3 FLOOR FINISHES

Whatever type of floor finish you choose, there are certain guidelines to follow. The most important one is the heat resistance (called R-value) of the flooring. When laying floors over underfloor heating, check the flooring manufacturer for recommendations and approvals before you begin. Important regulations apply to prevent any issues following installation. The best floor finishes to use in combination with the JK® system are the ones with a low heat resistance value, meaning that the heat from the underfloor heating pipe transfers to the floor surface quickly. Examples of such floor finishes are tiles, stone and vinyl.

However, flooring products with a higher heat resistance value are still very much suitable for underfloor heating, but may limit the heating capacity or response speed.

In addition to this, flooring products can be categorised as 'soft' flooring or 'solid' flooring. The soft flooring products, for instance carpet or luxury vinyl tile often require specific subfloor preparations to ensure that no pipe-pattern or uneven flooring elements are visible on the surface. Whereas solid flooring products such as tiles, stone and wood are more robust and can be, when using the correct adhesives, applied directly onto heating pipes or slightly uneven subfloor conditions, as the floor product will cover this up with no risk of this showing through the flooring surface.

MANIFOLDS

Manifold production is a core part of our business at the JK® group. We produce thousands of JK® manifolds annually in a wide range of customised configurations for use with the JK® system. Advanced production techniques and use of corrosion-free materials make the JK® manifolds a high-quality product. For example, the welding is carried out with TIG technology, followed by a bath of chemical staining and given a premium finish when it is blasted with glass beads.

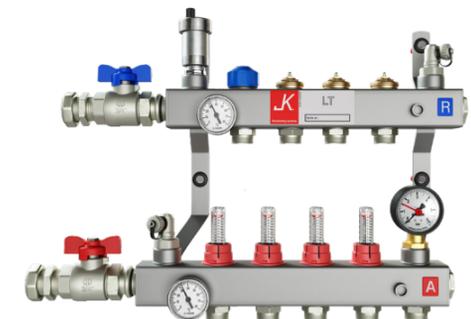
JK® Ecoline

The JK® Ecoline manifold is equipped with a patented and uniquely designed mixing valve, which is adjustable and therefore suitable for multiple applications. Moreover, the JK® Ecoline is equipped as standard with a direct-mounted A-rated circulation pump, and is therefore suitable for connecting directly to a hot water source. The JK® Ecoline is generally used with a normal gas or electric boiler, but it can be used with any high temperature heat source (> 55°C). The pump circulates the water through the internal blending-valve and mixes the hot water with the cooler return water of the underfloor heating system. A unique feature on the JK® Ecoline manifold is the integrated maximum temperature protection. This means that if any failure occurs in the central heating supply, the circulation pump will turn off to offer a level of protection from overheating the floor.



JK®-LT (Low-Temperature)

The JK® LT manifold is not fitted with a circulation pump, making it an ideal fit for any heating system with a low temperature (< 55°C) heat source. The water supply is usually provided by a remote water pump, which circulates the water through the underfloor tubing, and is often part of a renewable energy system, such as solar panels, ground-source heat pumps (GSHP), air-source heat pumps (ASHP) or high efficiency electric, hydrogen or gas boilers.



IN-HOUSE INSTALLATION BY JK®

At JK® good service is paramount. With a world of experience, we ensure that you receive the latest information, knowledgeable advice and quality installation. The result? A premium service perfectly tailored to your project.

JK® flexseal

The JK® flexseal is a product developed as backfill over the JK® system. It is suitable for almost all floor surfaces, including non-breathable surfaces such as tiles or ceramics. Specific additives are included into the JK® flexseal to allow an extreme durable bonding with not just the cementitious subfloor but also the JK® flextube. The product not only backfills any airgaps which may have occurred between the pipe and the created channels, thus increasing heat transmission, but also has damp shielding characteristics such as those found in dampproof membranes (DPM). Once the JK® flexseal is applied, it creates the ideal surface for further flooring applications, such as levelling and smoothing compounds, as well as final flooring products.

JK® flextube

The JK® system solely uses the JK® flextube as its approved pipe, which meets the BRL5602 testing standard. The JK® flextube is an inverse PE-RT [Polyethylene of Raised Temperatures resistance] pipe, known for its extremely high industry standards. The 14*2mm Ø five layered pipe combines quality with durability, high temperature endurance, flexibility and long-term power. The pipes are laid in an optimal snail-shell pattern, creating an even heat distribution across the entire floor surface area. This is achieved by a 14mm pipe, the ideal size for the underfloor heating market, resulting in a more compact UFH system.



Frequently Asked Questions (FAQ)

Is my existing floor construction suitable for a JK® system?

It's safe to say that 99% of all solid floor constructions are suitable for the JK® system. This also includes solid reinforced concrete for industrial applications, or homes with floors made out of natural stone flooring.

How long does it take to complete the UFH Installation?

Most home installations can be achieved in as little as just one day. This is depending on the floor construction and the size of area we are installing the system into.

At what depths are the grooves cut into the floor?

The JK® floorgrinder cuts approximately 16 [mm] into the floor construction. The 14 [mm] JK® flextube pipe is installed directly in to the cut channels thereafter. The ultimate aim is to have the heating pipes flush, or just under the floor surface.

How much dust is created from the machine during the cutting process?

The JK® floorgrinder is fitted with HEPA filter technology, and an industrial on-tool extraction (LEV). The installation is therefore virtually dustless.

When can I use the underfloor heating system?

This differs depending on each flooring product and the drying time of the adhesives used. Generally, the start-up period may begin a few weeks after installation. However, it is important to begin by using the lowest temperature setting and increasing by a couple of degrees per day to ensure the system correctly integrates.

What if I have timber sub-floor construction? Is installation still possible?

The JK® LogiDeck is the perfect solution for this, whether it be on the ground or upper floors. For more information contact your JK representative.

How warm will my house get?

This is a function of your home's heat losses versus the heating system's output. The moment the heat output achieves the required demand, the home will be warm.

Modern homes will have no problem heating above 20°C. Older homes generally do not experience any issues, especially if roof insulation and double glazing is present in the property. However, if you are concerned about this, the best thing to do is get a heat loss report done on the property to see how much energy you need to put into the rooms to heat them comfortably. The JK® system is fully tested and heat performance reports are available.

Will it work with an uninsulated slab?

The JK® system accommodates both insulated and uninsulated slabs, including integration with low-energy systems like heat pumps. We have diligently followed industry guidance to quantify energy loss in uninsulated slabs and meet criteria outlined in Part L (UK) of the building regulations. This is crucial not only from an energy perspective but also in terms of CO2 emissions. The embodied energy within the in-situ slab cannot be compensated by the reduction in subsequent savings achieved through the removal and reinstatement of this building element, as per the guidelines set forth in Part L, building regulations, and SAP.

Should I use a JK® Ecoline manifold with my ASHP/GSHP?

JK® recommend that the heatpump should be allowed to operate on weather compensation and ideally limited to 45°C. Using a JK® ecoline manifold with a heat pump to reduce the water temperature would lose the efficiency gained by using a heat pump. We would recommend the JK® LT manifold for any low temperature heat source.

Can I use wooden floors or LVT with underfloor heating?

Wood, LVT and other sensitive floor finishes are excellent choices for use with underfloor heating, however, you must make sure to protect them by installing floor temperature sensors. Flooring manufacturing companies have strict stipulations regarding floor-surface temperatures and these must be monitored. Floor temperatures should be limited by electronic means through your control system and not necessarily by controlling the water temperature, as this is inaccurate.



Contact

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Expert advice given



Expert advice given by sales team. I even keep going back with additional questions and they answer in a timely manner. Would strongly recommend that you consider this company.

Ian Roughley



Excellent
4.7 out of 5



GET IN
TOUCH

REQUEST
A QUOTE



After 30 years of installing underfloor heating systems across 12 countries, JK® have the expertise to get the job done, no matter where you are.