

BIM FACTORY FOR TS

**A GUIDE TO THE KNAUF INSULATION
BIM FACTORY FOR TS TOOL**



challenge.
create.
care.

BIM FACTORY FOR TS: WHAT IT IS AND HOW TO USE IT

'BIM Factory for TS' by Knauf Insulation Technical Solutions is an innovative way to get Building Information Modelling (BIM) from manufacturers. BIM Factory pulls together product information from various formats and sources in one central database. This can then be used to provide collated product information on demand, in one unique BIM file.

The BIM Factory for TS offers:

- ✓ Free and intuitive platform to plan and generate BIM objects of systems for thermal insulation and fire protection
- ✓ Details of more than 7000 BIM products / systems
- ✓ On-demand file generation according to users' needs
- ✓ Intuitive selection of the insulation product / system and equipment (pipe or duct), based on application, technical properties, dimensions and national energy efficiency regulations
- ✓ Possibility to get brand visible or product / system neutral BIM objects
- ✓ BIM object available in multiple formats, including Revit, Archicad and Ifc formats
- ✓ An interactive user interface, with no prior understanding of BIM required

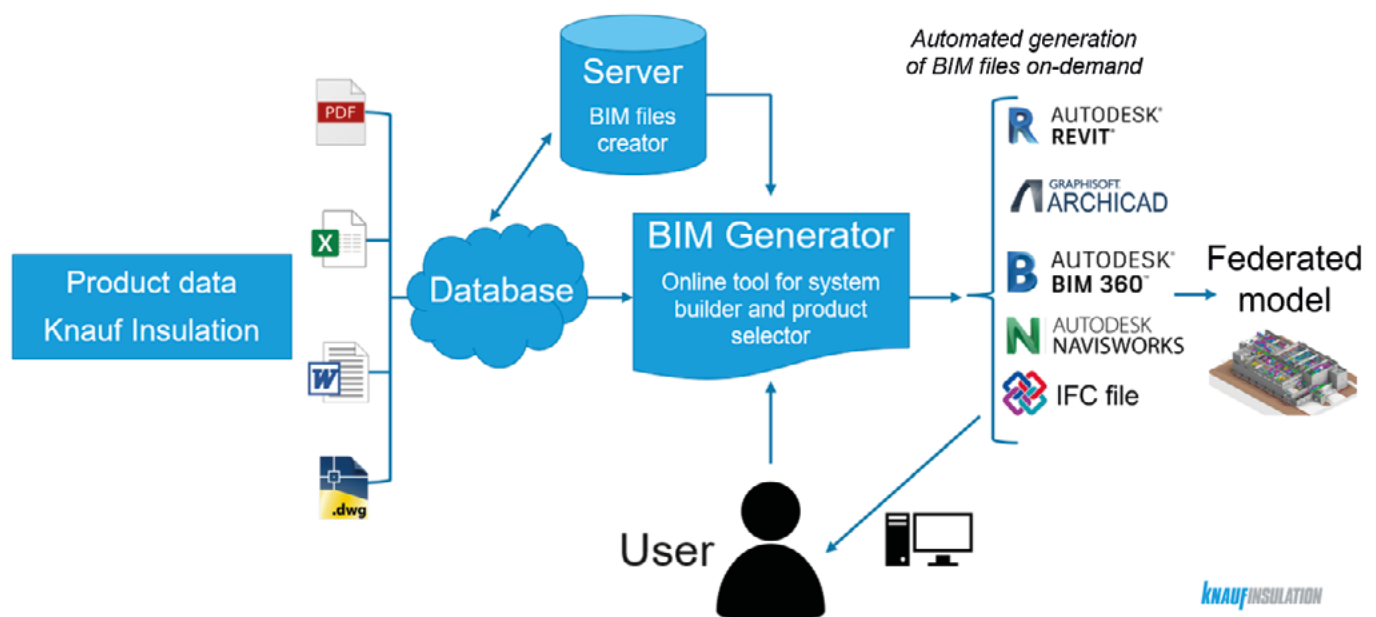


**The tool is
available at
the following
link:**



HOW DOES IT WORK?

Product data from Knauf Insulation TS is automatically integrated into one database. The 'BIM Factory for TS' database is connected to a server and BIM generation tool that combines all product data, automatically creating BIM files based on a user's request.



BIM FACTORY

Knauf Insulation Technical Solution's BIM Factory for TS tool is a free and intuitive platform to plan and generate BIM objects for systems, according to your needs!

EXPLORE OUR BIM FACTORY →



All the data is displayed in one online tool, making it easier to select products based on their materials, properties, and other features.

KNAUF INSULATION TECHNICAL SOLUTION'S BIM FACTORY FOR TS TOOL IS A FREE AND INTUITIVE PLATFORM TO PLAN AND GENERATE BIM OBJECTS FOR SYSTEMS, ACCORDING TO YOUR NEEDS!

It offers smart solutions for thermal insulation (Thermo-teK range) and fire protection (Fire-teK systems) of pipes and ducts, available in Revit, Archicad and IFC formats.

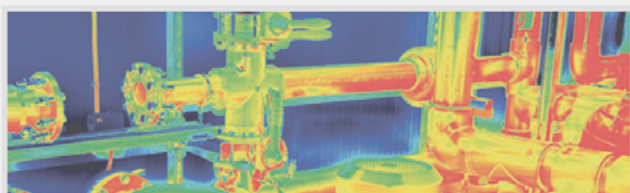
The BIM tool allows intuitive selection of the insulation product/system, including equipments (pipe or duct) and eventual cladding, based on application, technical properties, dimensions and national energy efficiency regulations. It gives the possibility to create instantly custom BIM objects of the insulation systems, according to your needs.

The BIM files include all information about the products/systems: technical characteristics, links to documentation and also a visualisation of systems.

The BIM objects are available in brand visible or product neutral versions, to be used also for public tenders.

You can now start to plan and generate your BIM objects by selecting different options:

THERMAL INSULATION



FIRE PROTECTION



Through an interactive, simple interface, the user selects the product, equipment, properties and features desired. The 'BIM Factory for TS' then generates ready-to-download BIM files in line with the chosen criteria:

SELECT TYPE OF EQUIPMENT

 PIPE

 DUCT

SPECIFY PIPE PARAMETERS

Pipe material

 STEEL

 STAINLESS STEEL

 COPPER

 PLASTIC

Nominal pipe diameter DN [mm] *

Outer pipe diameter [mm] *

SPECIFY INSULATION PARAMETERS

Type of insulation

 PIPE SECTION

 LAMELLA MAT

 ROLL

Insulation facing *

Additional cladding *

Insulation product

At a later stage, it is possible to add extra features, such as insulation thickness according to different energy efficiency national regulations, thermal conductivity values depending on temperature, fire reaction performance, apparent density and maximum service temperature:

SPECIFY INSULATION REQUIREMENTS

Country - Energy efficiency national regulations /
General available thicknesses *

Country - additional conditions 1

Insulation thickness *

Thermal conductivity at 10 °C [W/mK]

Thermal conductivity at 40 °C [W/mK]

Insulation fire reaction

Insulation maximum service temperature [°C]

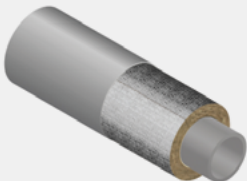
Insulation apparent density [kg/m³]

A list of results will then show selected specifications:

RESULTS			
Details			
	Thickness [mm]	λ at 10 °C [W/mK]	λ at 40 °C [W/mK]
 Knauf Insulation Thermo-teK PS PRO ALU - Steel pipe, 100 mm (Metal sheet)	50	0.033	0.035
			CREATE BIM OBJECT

The user can browse these and sort according to characteristics, with a brief visual overview of the final composition and properties to be downloaded. The user can also choose the type of file to download and get the possibility to get brand visible or product / system neutral BIM objects:


CONFIGURE CONTENT OF BIM FILES:




Select files to download:

- ☒ REVIT file
- ☒ ARCHICAD file
- ☒ IFC file

Brand visibility:


BRAND VISIBLE


PRODUCT NEUTRAL

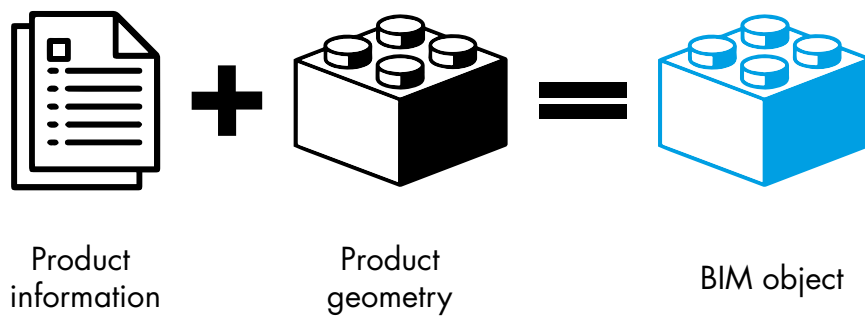
The BIM object selected is then emailed to the user in the format chosen.



BIM: VISUALISATION & INFORMATION

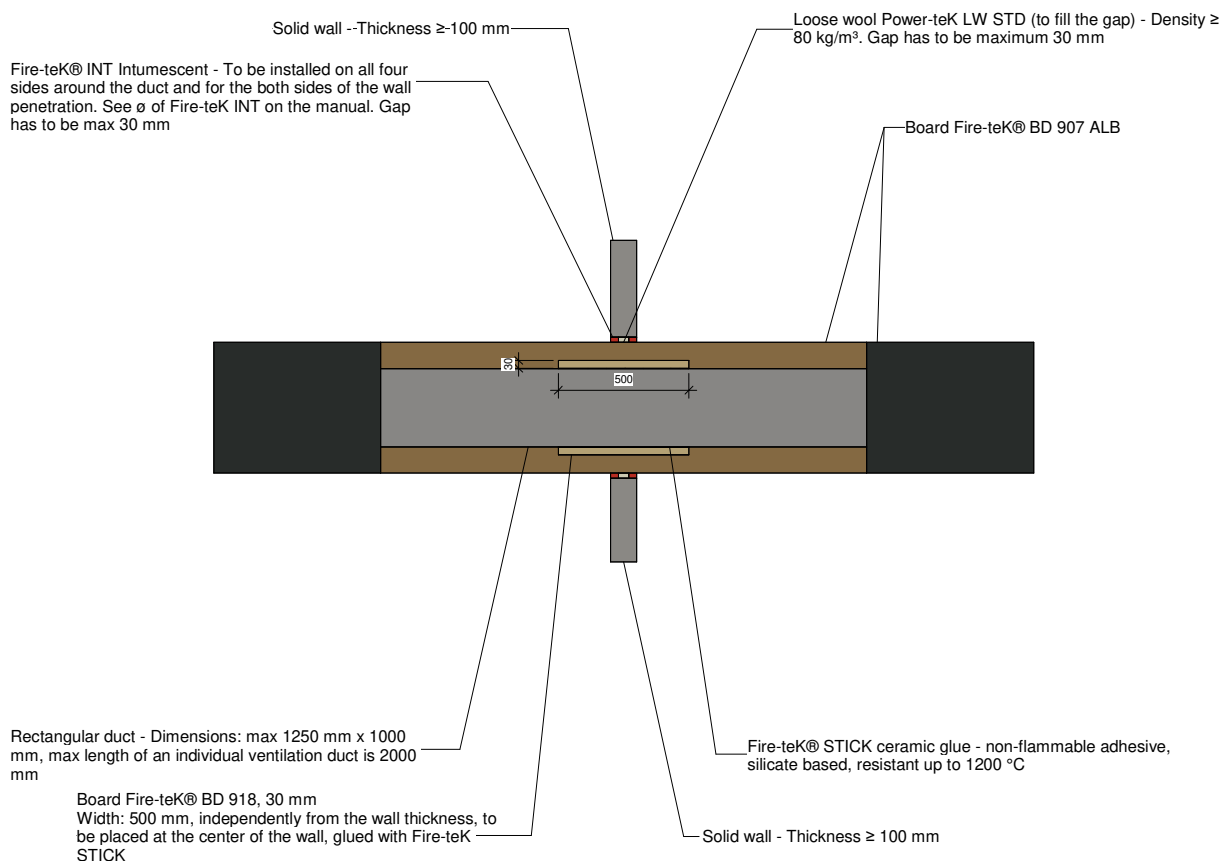
At Knauf Insulation Technical Solutions, Building Information Modelling (BIM) means the creation of visual models carrying information to be shared. BIM can therefore be defined as »visualisation with information built in, as part of a collaborative project.«

BIM brings together people and technology, to optimise time, define costs, and improve efficiency. A building project using BIM has greater transparency and quality, as well as more reliable prices and deadlines.



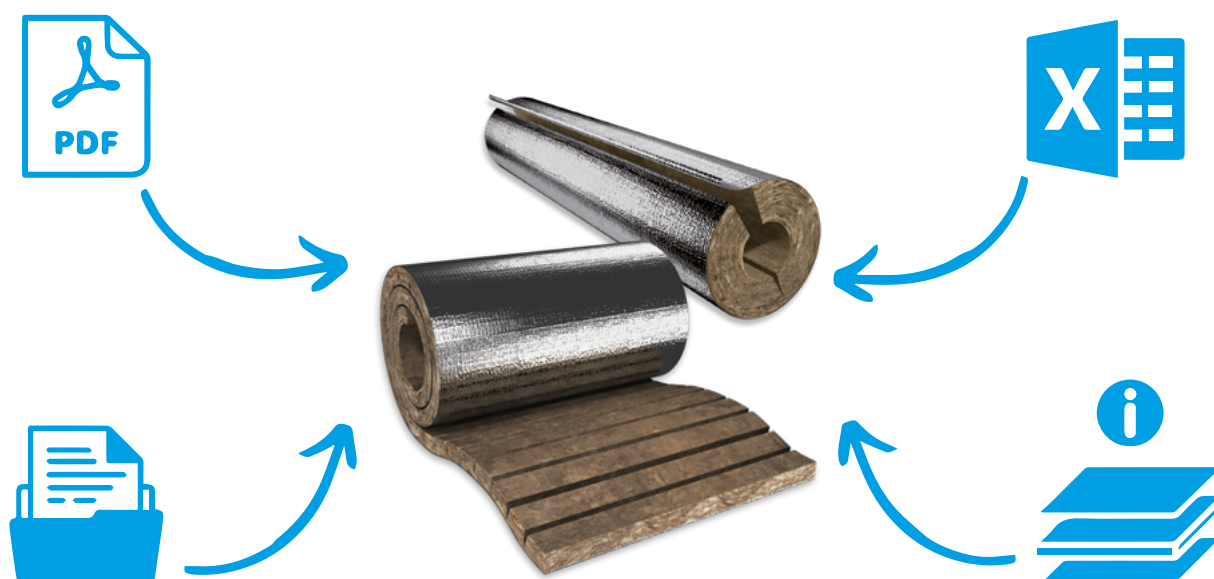
VISUALISATION

Concerning the fire protection systems, the user can get a 2D scale drawing of the system directly in the BIM files, according to the features and dimensions selected in the tool.



INFORMATION

Compiling product data has been always a challenge. Relevant information can include declarations of Performance (DOP), Technical Data Sheets (TDS), and thousands of other files containing comments or tables, without any solid structure. With BIM all these are combined, providing one single, structured file with all relevant information. A BIM file includes not only a visualisation of the product but also product properties, such as thermal, acoustic, fire protection and sustainability properties. The options are limitless as new parameters and fields can be added to meet a manufacturer's needs, but the end result will always be one file rather than several reports and documents.

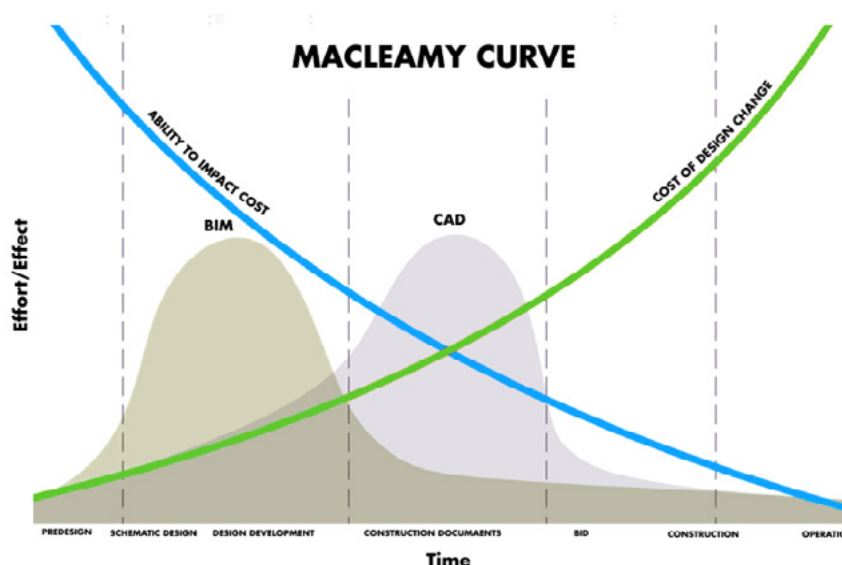


HOW DOES BIM WORK?

At Knauf Insulation Technical Solutions we are focusing effort on the design phase with the BIM methodology. BIM can support more solid and better-planned design, cutting cost and errors during construction and later product stages.

The MacLeamy Curve diagram (opposite) shows that, the later in the design process changes are made, the further costs will increase. This correlates directly with potential project delays, waste, and increased delivery costs.

Focusing on the design phase also makes it crucial to reach a client or contractor at an early stage. Knauf Insulation Technical Solutions positions itself as an important manufacturer, providing ready-to-use BIM products for designers to test during the conception phase and use to make a final design decision.



Designers know that, in 76% of cases, if the product meets the necessary criteria the first product chosen at the design stage goes on to be the final choice. This is why Knauf Insulation Technical Solutions works hard to provide designers with the product specifications they need at an early design stage of the process.

ONE MODEL, ALL THE INFORMATION

BIM connects people. Collaboration, coordination and communication are core aspects of this methodology.

It also works as a central contact point of contact. It can be described as a Common Data Environment (CDE). This means a collaborative space where all the different parties involved can share their work and check a database for other parties' information.

The main idea is that works are planned separately but coordinated before construction. A change to any part of the database and model can be automatically updated in all other parts, so by constantly referring to the BIM model for the latest product data on the project gives the most up to date information.

The reference full BIM model, known as the coordinated or federated model, is accessible to everyone. This is reference model is enhanced through collision checks, one of the main benefits of working with BIM. Decisions traditionally made by many separate teams at the construction site, based on the on-site conditions, can now be planned in close coordination by using the BIM work methodology.

Investors increasingly expect to know a building's total lifecycle costs, rather than the initial price or execution expenses. By taking every stage of work and every branch of construction into account to create a project model, it becomes possible to anticipate errors likely to occur during construction at the planning stage, saving time and money and giving a better estimate of the total lifecycle cost.

BIM: KNAUF INSULATION TS AND BEYOND

The move to digital information makes it more important to be able to access shared data. 'BIM Factory for TS' joins all digital information in one rich, visual file. The Factory serves as a source of information for the Mechanical Engineering and Piping (MEP) sector at the design phase, making Knauf Insulation Technical Solutions and its partners part of the development of projects in their early stages.

WHY AN ONLINE LIBRARY?

The production of BIM catalogues containing all the manufacturer's information provides customers with everything they need in one simple and compact data set, along with a smooth visualisation of the product or system itself.

Independent BIM libraries are growing fast. They lead to huge numbers of product downloads by different manufacturers. Knauf Insulation Technical Solutions provides information from the original source, to show transparency, credibility, and capability by offering the latest technology solutions.

BIM AS INFORMATION MANAGEMENT

Talking in the same language facilitates communication. Good communication is key to the success of any business. The ability to exchange information in the same format therefore promotes a successful workflow at all levels. Knauf Insulation Technical Solutions works with BIM to share product data simply and compactly, easing the designer's workload by:

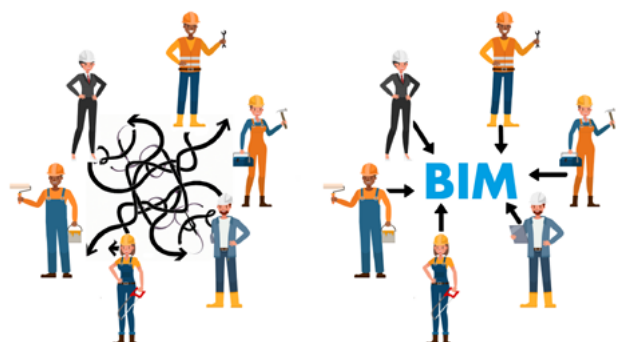
- ✓ Connecting and standardising different information sources
- ✓ Displaying accurate and updated data
- ✓ Streamlining communication and handovers by providing a unique reference file

WHAT SHOULD BIM FACTORY FOR TS ACHIEVE?

A major problem encountered by the construction industry is a poor flow of information between teams and companies involved in a single project. Up to 92% of planners have reported that information is not all available when a design is made.*

Using 'BIM Factory for TS' to manage information, it becomes possible to simplify dataflow, making this clear, direct, and easy for everyone, from clients to designers.

If everyone refers to the BIM for product data, the BIM becomes a reliable and solid information source and the BIM provider is a trusted pioneer manufacturer.



*Source: CMAA Owners Survey, CMAA Industry Report, Economist Magazine).

WHO WAS BIM FACTORY DEVELOPED FOR?

Designers, engineers, BIM managers / engineers, contractors and insulation companies are the main target audience but the 'BIM Factory for TS' can be used by everyone in the MEP sector and beyond. No prior knowledge of BIM is required.

Clients, designers, investors, contractors, and organisation employees can all use this tool to get product information in a structured, standardised way.



WHAT ARE THE MAIN BENEFITS OF USING BIM FACTORY FOR TS?

Using 'BIM Factory for TS' means creating a product together with Knauf Insulation Technical Solutions, being part of the process from an early conception phase. It means being able to shape the products / systems and its specification according to specific needs. It means having a user-friendly interface to build a system from one simple, easy to manage perspective.

There are many widely known benefits of using BIM. The following are some of those highlighted by an AEC sector survey 'Capturing the Return on Investment of All-In Building Information Modelling: Structured Approach':

- ✓ 74% of BIM users agreed that satisfying BIM products are extremely important to choose the brand for the next projects
- ✓ Between 60-80% reported a positive return on investment (ROI)
- ✓ 61% saw an increase in their project's productivity
- ✓ 59% said BIM helped them to save time working on a project
- ✓ BIM users found that total project cost could be reduced by 10%
- ✓ Changes needed over execution processes were reduced by 40%
- ✓ Cost and time estimation accuracy was predicted within 3%
- ✓ Waste construction materials were reduced by 37%
- ✓ 93% of users said there was a potential for even more value in the near future

* Ken Stowe; Sijie Zhang; Jochen Teizer; and Edward J. Jaselskis 2015

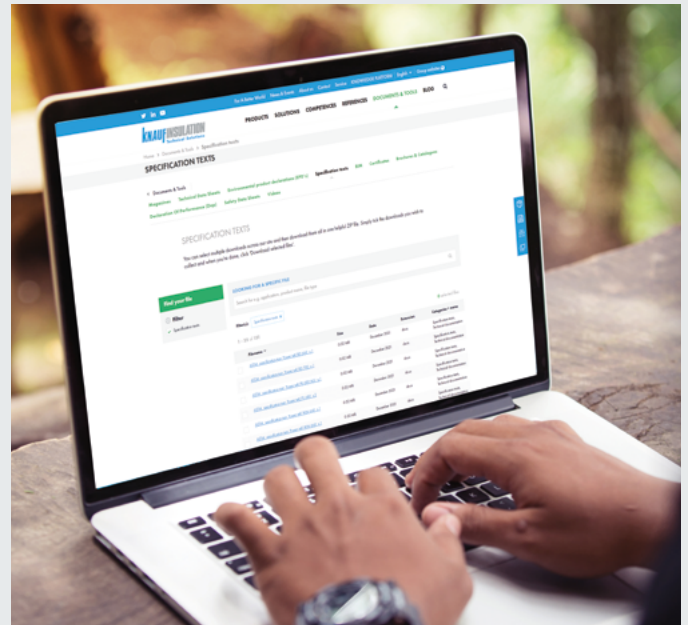
OUR DIGITAL TOOLS

SPECIFICATION TEXTS

Free and ready-to-use specification texts for Knauf Insulation Technical Solutions products portfolio to save your time. They are perfect for usage in project and tender documentation.

BENEFITS

- ✓ Specification texts in **.doc format** to be easily copied and pasted into tenders
- ✓ Free of charge and online any time at www.knaufinsulation-ts.com
- ✓ Neutral and usable in public tenders, without naming of Knauf Insulation brand directly
- ✓ Available in different languages



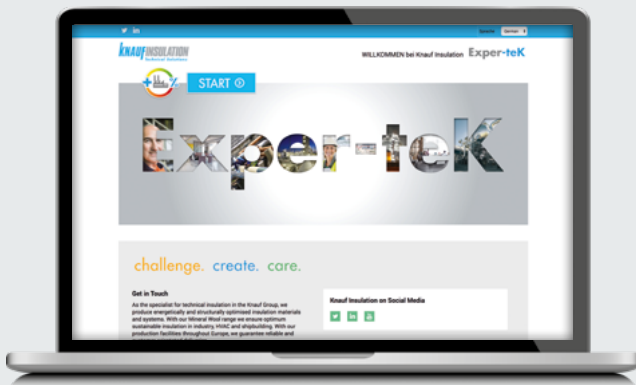
Download
specification texts
from our website:



KNOWLEDGE PLATFORM

Exper-team offers a knowledge center with know-how transfer for all areas of technical insulation.

From experts for experts!



EXPER-TEK ONLINE CALCULATION TOOL

Exper-teK is the simplest tool for thermal calculations, calculations of CO₂ and calculations of potential condensation, highly appreciated by the specifiers. It is also the only tool that is adjusted to several different users' profiles, based on standards EN ISO 12241 / BS 5422 and VDI 2055-1 certified calculation methods and available in 20 languages.

BENEFITS

- ✓ Online at any time and free of charge
- ✓ Intuitive and easy user guidance
- ✓ Uncomplicated calculation of heat losses and
- ✓ Energy costs obtained after only 5 steps
- ✓ VDI-certified / EN ISO 12241 calculation methods
- ✓ Calculation of CO₂ savings **NEW!**
- ✓ Calculation of potential condensation **NEW!**
- ✓ Available in various languages



USE
EXPER-TEK
TOOL:





Our products save energy, cut emissions and are designed to make sure buildings and applications are good for the environment and keep people healthy, safe and well. Across our company, we have been working on sustainability for over a decade. We have focused on zero harm, reducing our energy use and emissions, recycling our production waste, incorporating circular economy principles and constantly campaigning for better and more sustainable buildings and applications. Over the past decade, we have achieved great things and we are proud of how we have changed our company, helped our colleagues, communities and customers and reduced our impact on the environment. But sustainability is a process of continuous improvement. We must do more for our people and our environment. That's why we've created our new sustainability strategy. We call the new strategy **'For A Better World'** because it builds on the success of our mission statement: "Our vision is to lead the change in smarter insulation solutions for a better world."



LIVING WITH A GREEN HEART

LIVING WITH A GREEN HEART

The "Living with a Green Heart" initiative promotes a comprehensive approach to sustainable development with **emphasis on societal and social sustainable development**, placing an informed individual at the forefront of sustainable transformation of society. "Living with a Green Heart" presents a unique story and approach that encourages companies, organisations, and individuals to:

- ✓ Create sustainable products and solutions which can transform grey cities into green oasis, build safe and comfortable homes and lead to a better world for all of us.
- ✓ Lead social sustainability actions, cocreating a more informed and kinder future for ourselves and those that come after us.
- ✓ Build a friendlier and more responsible environment for employees at all levels and in all aspects, appreciating the diversity and improving our relationships, as well as the way we work, collaborate, and coexist within our environments.

CONTACTS

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FOR FURTHER INFORMATION VISIT
OUR WEBSITE WWW.KNAUFINSULATION-TS.COM/



Premium member of



COMPANY PROFILE

Knauf Insulation is one of the most respected names in the insulation industry worldwide with over 40 years of experience and still growing fast to nearly 6.000 employees in more than 40 countries and 29 manufacturing sites. Being part of the family-owned Knauf group, Knauf Insulation Technical Solutions provides solutions for customers' requirements in industry, marine applications, heating, ventilation and air conditioning. A profound market understanding and insulation know-how enables us to provide a broad range of products to meet your specific needs.

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