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Deutsch-Slowenische  
Industrie- und Handelskammer  
Slovensko-nemška  
gospodarska zbornica



MITTELSTAND  
GLOBAL  
ENERGY SOLUTIONS  
MADE IN GERMANY

# Energy Efficiency Awards

Energy Efficiency in Buildings made in Germany

21<sup>st</sup> April 2021, Ljubljana

<https://slovenien.ahk.de/events/event-details/energy-efficiency-awards>

# Priznanja za energetska učinkovitost v Sloveniji

Energetska učinkovitost »Made in Germany«

21. april 2021, Ljubljana

<https://slovenien.ahk.de/sl/prireditve/dogodki-podrobno/energy-efficiency-awards>

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The German-Slovene Chamber of Industry and Commerce is delighted to welcome you to the Energy Efficiency Awards where six energy efficiency projects in Slovenia using German technology will be presented as today's finalists.

The German-Slovene Chamber of Industry and Commerce has invited German companies that have successfully implemented innovative energy-efficient technologies in Slovene buildings to submit their most promising reference projects. Through a competitive selection process by our expert jury, six German companies have been chosen to receive one of the desired awards and present their building solutions to a broad range of experts, decision makers and media representatives.

### Our six finalists are:

- **LUNOS Lüftungstechnik GmbH:** Villas on Brdo
- **K2 Sytems GmbH:** Installation of the MFE solar power plant Veno Pilon High School
- **Viessmann Climate Solutions SE:** Central energy system, Ljubljana Jože Pučnik Airport
- **Max Weishaupt GmbH:** Aparthotel Stare
- **Knauf Insulation SPRL:** Knauf Insulation Experience Center
- **Menerga:** The implementation of the ventilation and RES use system at kindergarten Kamnitnik (Škofja Loka, Slovenia) / The Kmnitnik low-energy kindergarten project

Slovensko-nemška gospodarska zbornica vas z veseljem pozdravlja na podelitvi nagrad za energetske učinkovitost, kjer bo kot današnji finalist predstavljenih šest projektov energetske učinkovitosti v Sloveniji z uporabo nemške tehnologije.

Slovensko-nemška gospodarska zbornica je nemška podjetja, ki so v slovenskih stavbah uspešno implementirala inovativne energetske učinkovite tehnologije, povabila k oddaji svojih najbolj obetavnih referenčnih projektov. S konkurenčnim izborom naše strokovne žirije je bilo izbranih šest nemških podjetij, ki jih bomo v okviru projekta »Priznanja za energetske učinkovitost v Sloveniji«, nagradili sodobne energetske-učinkovite tehnologije.

### V okviru projekta so bili izbrani naslednji finalisti:

- **LUNOS Lüftungstechnik GmbH:** Vile na Brdu
- **K2 Sytems GmbH:** Postavitev sončne elektrarne MFE srednja šola Veno Pilon
- **Viessmann Climate Solutions SE:** Centralni energetske sistem na letališču Jožeta Pučnika
- **Max Weishaupt GmbH:** Aparthotel Stare
- **Knauf Insulation SPRL:** Knauf Insulation demonstracijsko-izobraževalni center
- **Menerga:** Izvedba prezračevanja in izraba OVE vrtca Kamnitnik (vrtec Škofja Loka) / Nizko energetske vrtec Kamnitnik



The Energy Efficiency Awards in Slovenia is funded within the German Energy Solutions program of the Federal Ministry for Economic Affairs and Energy. Its aim is to recognize outstanding achievements of German technology suppliers in Slovenia, showcasing technologies and innovations that contribute to increasing energy efficiency in Slovene buildings. It is designed to help German companies strengthen their position in the Slovene market and make new connections within the sustainable energy and building sector. The awards provide participating German companies the chance to showcase their technologies and services that focus on increasing overall building performances.

The program will include presentations by industry experts on energy efficiency in Slovene buildings, the presentation of the six final projects, the award ceremony and a final digital networking event, giving you the opportunity to exchange ideas and explore business opportunities with industry pioneers and experts.

Dogodek v Sloveniji je financiran v okviru nemškega programa Energy Solutions nemškega Zveznega ministrstva za gospodarstvo in energetiko. Njegov cilj je prepoznati izjemne dosežke nemških dobaviteljev tehnologije v Sloveniji ter predstaviti tehnologije in inovacije, ki prispevajo k večji energetske učinkovitosti v slovenskih stavbah. Zasnovan je tako, da pomaga nemškim podjetjem okrepiti svoj položaj na slovenskem trgu in vzpostaviti nove povezave v trajnostnem energetske in gradbenem sektorju. Dogodek sodelujočim nemškim podjetjem omogoča predstavitev svojih tehnologij in storitev, ki se osredotočajo na povečanje splošnih zmogljivosti stavb.

Program bo vključeval predstavitve strokovnjakov iz panoge o energetske učinkovitosti v slovenskih stavbah, predstavitev šestih zaključnih projektov, podelitev nagrad in zaključni dogodek digitalnega povezovanja, ki vam bodo omogočili izmenjavo idej in raziskovanje poslovnih priložnosti s pionirji in strokovnjaki iz panoge.



Gertrud Rantzen

## Welcome by the German-Slovene Chamber of Industry and Commerce

The German-Slovene Chamber of Industry and Commerce is delighted to host their first digital awards show for the Energy Efficiency Awards in Slovenia. In the framework of this event the six finalist projects will be presented and rewarded with one of the desired awards.

I would like to express my gratitude towards the German Energy Solutions Initiative of the Federal Ministry for Economic Affairs and Energy for making the Awards as well as many other initiatives that helped Slovenia to become greener, possible.

All pioneering projects are based across the country, ranging from small family homes to large office complexes, but they have one thing in common: they all feature some of the most innovative German

## Nagovor s strani Slovensko-nemške gospodarske zbornice

Slovensko-nemška gospodarska zbornica se veseli svoje prve izvedbe projekta »Priznanja za energetske učinkovitost v Sloveniji«. V okviru tega dogodka bo predstavljenih šest slovensko-nemških projektov, ki bodo tudi nagrajeni.

Hvaležni smo iniciativi »German Energy Solutions« Nemškega zveznega ministrstva za gospodarstvo in energijo (BMW) za uresničitev dogodka in številnim drugim iniciativam, ki so pomagale, da je Slovenija postala bolj zelena.

Vsi pionirski projekti se izvajajo po vsej državi, od majhnih družinskih hiš do velikih pisarniških kompleksov, skupno pa jim je to, da so v svoji realizaciji uporabili nekatere najbolj inovativne nemške tehnologije, ki pomagajo povečati splošno energetske

technologies that help increase the overall energy efficiency of buildings. Slovenia set new national targets in their National Energy Efficiency Action Plan (NEEAP), where the key measures include those aimed at encouraging the implementation of energy performance contracting projects. It makes me proud to present these projects because they demonstrate the extensive, positive impact the collaboration of German and Slovene businesses can have not only on the respective businesses but also for a greater purpose like climate change prevention.

Those projects also demonstrate Slovenia's aim to increase the energy efficiency in their buildings, with measures that not only comply with the many new energy regulations set by the Slovene government but manage to go beyond. Germany, known for being home to many of the greatest engineers in the world, presents as an excellent partner for future related projects. And today, our six award-winning projects also offered the best proof.

The six final projects only provide an idea of a much larger amount of German technologies that could be installed in Slovene buildings in the future. The German-Slovene Chamber of Industry and Commerce is very keen on increasing such collaborations even further and will therefore continue to bring German and Slovene businesses together.

učinkovitost stavb. Slovenija je v nacionalnem akcijskem načrtu za energetske učinkovitost (NEEAP) postavila nove nacionalne cilje, med katerimi so ključni ukrepi, ki so namenjeni spodbujanju izvedbe energetske učinkovitih projektov. S ponosom predstavljamo izbrane projekte, saj dokazujejo ne le obsežen pozitiven vpliv sodelovanja nemškega in slovenskega gospodarstva na posamezna podjetja, temveč služijo tudi pomembnim namenom, kot je preprečevanje podnebnih sprememb.

Ti projekti dokazujejo tudi cilj Slovenije za povečanje energetske učinkovitosti v stavbah z ukrepi, ki ne ravnajo zgolj glede na številne nove energetske predpise, ki jih je določila slovenska vlada, ampak bi lahko energetske učinkovitost v Sloveniji ponesli celo dlje. Nemčija, znana po izrednih inženirjih, je odlična partnerica za prihodnje projekte. Najboljši dokaz za to so nagrajeni projekti.

Teh šest finalistov nam ponuja predstavo o številnih obstoječih možnostih sodelovanja z nemškimi podjetji, katerih tehnologije bi lahko namestili v slovenske stavbe. Slovensko-nemška gospodarska zbornica si želi tudi v prihodnje krepiti to sodelovanje, zato bomo še naprej povezovali nemška in slovenska podjetja.



Gertrud Rantzen  
CEO  
German-Slovene Chamber of Industry and Commerce



Gertrud Rantzen  
Predsednica Slovensko-nemške gospodarske zbornice



Christina Wittek

## Introduction

The technology showcase is a celebration of innovative German energy-efficient solutions in buildings in Slovenia. It is a great opportunity to promote successful German-Slovene partnerships, which have led to increased building quality, reduced energy costs and lower CO<sub>2</sub> emission levels in Slovenia. The 6 innovative projects, which are being shown in the framework of the technology showcase, present Slovenia as an attractive location for German companies seeking concrete partnerships and market opportunities.

The advanced technologies, know-how and expertise from the German companies involved in these projects conducted in Slovenia are representative of a wider success story: Germany is a world leader in the field of energy efficiency. Cutting-edge German technology is featured in all energy efficiency market segments, including insulation systems, insulated glazing, heating and cooling technologies, efficient home appliances, smart metering, energy-efficient lighting systems, cogeneration systems, as well as pumps and compressed air systems. German

## Uvod

Namen projekta »Priznanja za energetska učinkovitost v Sloveniji« je izpostaviti inovativne nemške energetska učinkovite rešitve v stavbah v Sloveniji. To je odlična priložnost za promocijo uspešnih nemško-slovenskih partnerstev, ki so v Sloveniji privedla do večje kakovosti stavb, nižjih stroškov energije in nižjih ravni emisij CO<sub>2</sub>. Šest inovativnih projektov, ki bodo prikazani v okviru predstavitve tehnologije, predstavljajo Slovenijo kot privlačno lokacijo za nemška podjetja, ki iščejo konkretna partnerstva in tržne priložnosti.

Napredne tehnologije, strokovno znanje in izkušnje nemških podjetij, ki so sodelovala pri teh projektih, ki se izvajajo v Sloveniji, predstavljajo širšo zgodbo o uspehu: Nemčija je vodilna na svetu na področju energetske učinkovitosti. Najsodobnejša nemška tehnologija je predstavljena v vseh tržnih segmentih energetske učinkovitosti, vključno z izolacijskimi sistemi, izoliranimi zasteklitvami, ogrevalnimi in hladilnimi tehnologijami, učinkovitimi gospodinjskimi napravami, pametnim merjenjem, energetska učinkovitimi razsvetljalnimi sistemi, kogeneracijskimi

companies generate a turnover of about \$72 billion per year in this industry.

Since 2007, the Federal Ministry for Economic Affairs and Energy has successfully supported German-Slovene partnerships via the German Energy Solutions Initiative. The Slovene market has proved to be very open to German suppliers of energy-efficient products, systems and services. Since this initiative was launched, the German-Slovene Chamber of Commerce has been active in creating and hosting successful cooperation platforms such as energy trade missions and fact-finding missions. This showcase project is a first for Slovenia, and it gives the German Ministry for Economic Affairs and Energy a welcome opportunity to celebrate some great examples of German-Slovene partnerships in the building sector.



**Christina Wittek**  
Head of Division  
German Energy Solutions Initiative  
Federal Ministry for Economic Affairs and Energy

sistemi ter črpalkami in sistemi s stisnjenim zrakom . Nemška podjetja v tej panogi ustvarijo približno 72 milijard ameriških dolarjev prometa na leto.

Od leta 2007 Nemško zvezno ministrstvo za gospodarstvo in energijo (BMWi) uspešno podpira nemško-slovenska partnerstva prek nemške iniciative za energetske rešitve. Slovenski trg se je izkazal za zelo odprtega za nemške dobavitelje energetske učinkovitih izdelkov, sistemov in storitev. Od začetka te pobude je Slovensko-nemška gospodarska zbornica dejavna pri ustvarjanju in gostovanju uspešnih platform za sodelovanje, kot so misije za trgovino z energijo in misije za ugotavljanje dejstev. V Sloveniji se tak tip projekta sicer izvaja prvič, ampak daje Nemškemu zveznemu ministrstvu za gospodarstvo in energijo (BMWi) priložnost, da nagradi nekaj odličnih primerov nemško-slovenskih partnerstev v gradbenem sektorju.



**Christina Wittek**  
Vodja oddelka  
German Energy Solutions Initiative  
Nemško zvezno ministrstvo za gospodarstvo in energijo (BMWi)

# About the German Energy Solutions Initiative

With energy prices on the rise and fossil fuel resources becoming scarce, both economic prosperity and competitiveness increasingly depend on our ability to use new energy sources and energy efficiency solutions. This applies to all countries worldwide. The use of innovative energy solutions offers enormous potential for energy conservation in all fields.

The promotion of smart and sustainable energy solutions in Germany has resulted in the establishment of an industry which offers some of the world's leading technologies. This industry encompasses several thousand small and medium-sized enterprises specialised in the development, design and production of renewable energy systems, energy efficiency solutions, smart grids and storage technologies. Also new energy technologies like Power-to-Gas and fuel cells are the basis for cutting-edge energy solutions.

The transfer of energy expertise, the promotion of foreign trade and the facilitation of international development cooperation are part of the German Energy Solutions Initiative. We offer:

- networking and business opportunities both in your country and in Germany
- showcasing of reference projects
- know-how exchange

Coordinated and financed by the German Federal Ministry for Economic Affairs and Energy (BMWi), the initiative is implemented in cooperation with partners such as German bilateral chambers of commerce (the AHKs), the German Energy Agency (dena) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

For more information, please visit [www.german-energy-solutions.de/en](http://www.german-energy-solutions.de/en).

# O nemški energetske iniciativi »Germany Energy Solutions«

Ko cene energije naraščajo, viri fosilnih goriv pa postajajo vse redkejši, sta tako gospodarska blaginja kot konkurenčnost vedno bolj odvisni od naše sposobnosti uporabe novih virov energije in rešitev za energetske učinkovitost. To velja za vse države po vsem svetu. Uporaba inovativnih energetskih rešitev ponuja ogromen potencial za varčevanje z energijo na vseh področjih.

Promocija pametnih in trajnostnih energetskih rešitev v Nemčiji je vzpodbudila ustanovitev industrije, ki ponuja nekatere vodilne svetovne tehnologije. Ta panoga zajema več tisoč malih in srednje velikih podjetij, specializiranih za razvoj, načrtovanje in proizvodnjo sistemov obnovljivih virov energije, rešitev za energetske učinkovitost, pametnih omrežij in tehnologij za shranjevanje. Tudi nove energetske tehnologije, kot sta napajanje s plinom in gorivne celice, so osnova za najsodobnejše energetske rešitve.

Prenos energetskega strokovnega znanja, spodbujanje zunanje trgovine in mednarodnega razvojnega sodelovanja so del nemške iniciative za energetske učinkovite rešitve. Ponujamo:

- mrežne in poslovne priložnosti tako v vaši državi kot v Nemčiji
- predstavitev referenčnih projektov
- izmenjava znanja in izkušenj

Pobuda, ki jo koordinira in financira Nemško zvezno ministrstvo za gospodarstvo in energijo (BMWi), se izvaja v sodelovanju s partnerji, kot so nemške gospodarske zbornice (AHK), Nemška agencija za energijo (dena) in Nemška družba za mednarodno sodelovanje (GIZ).

Za več informacij obiščite [www.german-energy-solutions.de/en](http://www.german-energy-solutions.de/en).



## Mag. Jure Čižman

Jožef Štefan Institute,  
Energy Efficiency Centre

Institut »Jožef Štefan«,  
Center za energetska učinkovitost

He joined Jožef Stefan Institute as an expert consultant in 2013. Research and applicative projects on energy efficiency and RES consumption are the main areas of his work. Recently, he has focused on the use of GIS tools in energy. He is actively involved in international projects and is a member of the Education & Training Working Group of the international technological platform DHC+ established within the framework of Euroheat&Power. Before, he worked as a secretary at the public institute Slovenian Accreditation. Among other tasks, he worked as a leading and expert assessor, an evaluator in European conformity assessment system and led assessor trainings. From 1999 to 2001, he worked as the head of inspection bodies at Metrology Institute of the Republic of Slovenia. His first employment was at the Faculty of Mechanical Engineering, where he worked as an assistant and received his master's degree in 1998.

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Kot strokovni svetnik od leta 2013 deluje v Centru za energetska učinkovitost na Institutu »Jožefa Stefana«, glavna področja njegovega dela so raziskave in aplikativni projekti na področju energetske učinkovitosti in rabe obnovljivih virov, v zadnjem času se dejavno ukvarja zlasti z analitiko in sistemskim načrtovanjem na področju ogrevanja in hlajenja ter z uporabo GIS orodij v energetiki. Aktivno je vključen v več mednarodnih projektov, je tudi član delovne skupine za izobraževanje (Education & Training Working Group) pri mednarodni tehnološki platformi DHC+, ki deluje v okviru Euroheat&Power. Pred tem je bil kot sekretar zavoda zaposlen na Slovenski akreditaciji, kjer je med drugim deloval kot vodilni in strokovni ocenjevalec, evaluator v evropskem akreditacijskem sistemu, vodil pa je tudi področje usposabljanja ocenjevalcev. Od leta 1999 do 2001 je na Uradu RS za standardizacijo in meroslovje opravljal delo vodje področja kontrolnih organov, prvih pet delovnih let pa je bil na Fakulteti za strojništvo v Ljubljani, kjer je leta 1998 tudi magistriral, zaposlen kot asistent.



## Borut Hočevár

Since 2014, Borut Hočevár has been editing the column and portal Environment and Energy at the newspaper Finance, and he also participates in the preparation of events related to energy issues. He has been working in journalism for 25 years and has also been with Dnevnik and the former Žurnal24. He mostly worked as a daily or as a line editor. He monitored the financial markets, domestic political developments, energy, as well as the wider domestic and foreign economic situation. By education, he is an economist who started in banking, where he worked for ten years, mostly in managing daily liquidity in treasury departments. He also worked as an independent entrepreneur in an international business for one year.

.....

Borut Hočevár od leta 2014 pri časniku Finance ureja rubriko in portal Okolje in energija, sodeluje pa tudi pri pripravi dogodkov, ki so povezani z energetska tematiko. V novinarstvu dela 25 let, bil je tudi na Dnevniku in na nekdanjem Žurnalu24. Večinoma je delal kot dnevni ali kot resorni urednik. Največ je spremljal finančne trge, notranjepolitično dogajanje, energetiko ter tudi širše domače in tuje gospodarske razmere. Po izobrazbi je ekonomist, začel pa je v bančništvu, kjer je delal deset let, večinoma pri upravljanju dnevne likvidnosti v oddelkih zakladništva. Eno leto je deloval tudi kot samostojni podjetnik v mednarodnem poslovanju.



## Alenka Lena Klopčič

Director & Video Editor  
alenka-lena.klopacic@energetika.net

Alenka Lena Klopčič has a bachelor's degree in economy and master's degree in Business and she has also finished postgraduate studies at the Faculty of State and European Studies. She joined Energetika.NET as a journalist in 2004 and became editor in 2007. In 2010, when Energetika.NET changed its status from a business unit to an independent company, Alenka took over as director. In 2013, she completed the Investigative Reporting Certificate Program at the New England Center for Investigative Reporting at Boston University, and in 2015, she completed WorldChicago's Tech Innovation, Entrepreneurship, and Education Fellowship Program, while in 2016 she completed HBX Disruptive Strategy, Harvard Business School's online course. She is currently pursuing two PhDs, one from the Faculty of Management, University of Primorska, and the other from the Ljubljana-based Faculty of Media. Since September 2020, she has been the main creator of energy video content for Energetika.NET ([www.energetika.net/en-tv](http://www.energetika.net/en-tv)).

Alenka Lena Klopčič je diplomirana ekonomistka in magistrica poslovnih ved ter mednarodnih študij. V uredništvu Energetike.NET je začela kot novinarka sredi leta 2004, urednikovanje je prevzela sredi leta 2007, direktorsko mesto pa v letu 2010, ko je Energetika.NET iz poslovne enote postala samostojno podjetje. 2013 je opravila program raziskovalnega novinarstva pri Centru za raziskovalno novinarstvo Nove Anglije na Bostonski univerzi, 2015 pa tehnološko-podjetniški program organizacije WorldChicago. 2016 je končala tudi Harvardov spletni tečaj HBX Disruptive Strategy. Alenka trenutno dela tudi dva doktorata, enega na Fakulteti za management Univerze na Primorskem in drugega na ljubljanski Fakulteti za medije. Od septembra 2020 je Alenka tudi glavna ustvarjalka videoenergetskih vsebin na portalu Energetika.NET ([www.energetika.net/en-tv](http://www.energetika.net/en-tv)).



## Franc Žlahtič

Franc Žlahtič obtained a PhD at the Faculty of Electrical Engineering, University of Ljubljana, Slovenia. He developed his professional career as a researcher with the Elektroinštitut Milan Vidmar, Ljubljana and as an assistant to professor on Faculty. After 25 years he moved to ministry for energy and served as an advisor to government, secretary, and acting director general. During the Slovenian presidency of the Council of the European Union in 2008, he chaired energy dossier. In year 2011 he collaborated with the Agency for the Cooperation of Energy Regulators (ACER) and joined to Slovenian gas transmission system operator as an advisor in year 2012. From 2019 he is retired. He is an author of three patents, active in the Slovenian Institute for Standardization (SIST), a member of CIGRÉ-CIRED, a member of Energy Council of the Slovenian Academy of Sciences and Arts and European Academies' Science Advisory Council, he was chairing the Slovenian World Energy Council for many years.

Franc Žlahtič je doktoriral na Fakulteti za elektrotehniko Univerze v Ljubljani. Svojo poklicno pot je razvijal kot raziskovalec pri Elektroinštitutu Milan Vidmar in kot asistent profesorja na fakulteti. Po 25 letih se je preselil na ministrstvo za energijo in služboval kot svetovalec vlade, sekretar in vršilec dolžnosti generalnega direktorja. V času slovenskega predsedovanja Svetu Evropske unije leta 2008 je predsedoval energetskega dosjeju. Leta 2011 je sodeloval z Agencijo za sodelovanje regulativnih organov za področje energetike (ACER) in se leta 2012 kot svetovalec pridružil slovenskemu operaterju prenosnega plinskega sistema. Od leta 2019 je upokojen. Je avtor treh patentov, aktiven v Slovenskem inštitutu za standardizacijo (SIST), član CIGRÉ-CIRED, član Sveta za energijo Slovenske akademije znanosti in umetnosti ter Svetovalnega odbora za znanost evropskih akademij (EASAC). Nenazadnje je bil vrsto let predsednik Slovenskega nacionalnega komiteja Svetovnega energetskega sveta.



## Ana Struna Bregar

Ana Struna Bregar is the executive director of CER - Center for Energy Efficient Solutions, a network of advanced companies and organizations that promote the transition to a climate-neutral economy. She holds a degree in university diploma in architecture. For more than 15 years, she has been developing and managing platforms for the presentation of innovative best practices, awareness raising and promotion in the field of quality-built space and sustainable economy. For the past three years, she has focused on sustainable management and a climate-neutral economy. She has obtained several certifications in this field, including from the Institute for Sustainability Leadership, University of Cambridge.

She was the head of the Chamber of Architecture and Spatial Planning of Slovenia (ZAPS). She is the founder and former director of the OHS - Open House Slovenia platform, the largest Slovenian architectural and real estate festival, which is part of an international network. For Open House Slovenia and the project of educating children and pedagogues about the built space - Playful Architecture, she also received the highest professional award - the Plečnik Medal. In 2020, she was the initiator of the Alliance for Green Recovery after Covid-19, for which the CER 2020 was given the award of the newspaper Finance.

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Ana Struna Bregar je izvršna direktorica zavoda CER - Partnerstva za trajnostno gospodarstvo Slovenije, mreže naprednih podjetij in organizacij, ki si spodbujajo prehod v podnebno nevtralno gospodarstvo. Po izobrazbi je diplomirana inženirka arhitekture. Že več kot 15 let se ukvarja z razvojem in vodenjem platform za predstavitev inovativnih najboljših praks, ozaveščanje in promocijo na področju kakovostno grajenega prostora ter trajnostnega gospodarstva. V zadnjih treh letih se je posvetila trajnostnemu managementu in podnebno nevtralnemu gospodarstvu. Na tem področju je pridobila več certifikatov, med ostalimi tudi od Institute for Sustainability Leadership, University of Cambridge.

Bila je vodja hiše arhitekture pri Zbornici za arhitekturo in prostor Slovenije. Je ustanoviteljica in nekdanja direktorica platforme Odprte hiše Slovenije, največjega slovenskega arhitekturno nepremičninskega festivala, ki je del mednarodne mreže. Za Odprte hiše Slovenije in projekt izobraževanja otrok in pedagogov o grajenem prostoru - Igriva arhitektura, je prejela tudi največje stanovsko priznanje - Plečnikovo odličje. V letu 2020 je bil pobudnica zavezništva za zeleno okrevanje po Covid-19, za kar so v CER leta 2020 prejeli nagrado časnika Finance.



#### Reference Project / Referenčni projekt

LUNOS Lüftungstechnik GmbH: Villas on Brod  
LUNOS Lüftungstechnik GmbH: Vile na Brodu

#### Year of Implementation / Leto izvedbe

2019-2020

#### Key Characteristics / Glavne karakteristike

- the construction of five two-apartment villas with parking roofs / zgradba pet dvostanovanjskih vil z nadstreški za parkiranje
- communal and external arrangement / komunalno ter zunanjo ureditev
- LUNOS system of ventilation of living space buildings with recuperation / Lunosov sistem prezračevanja stavb bivalnih prostorov z rekuperacijo
- the ventilation of bathrooms / Lunosov sistem prezračevanja kopalnic

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# LUNOS Lüftungstechnik GmbH: Villas on Brod

LUNOS Lüftungstechnik GmbH - at that time LUNOS Lüftung - emerged in 1959 from the family business of the building contractor and architect Benno Schöttler, who had manufactured ventilation shafts and bricks from 1949 and subsequently concentrated on the development of small fans for living areas. The in-house planning and development office was responsible for new developments.

The company has remained true to the principle of in-house development and production in Germany also after being renamed LUNOS Lüftungstechnik GmbH für Raumluftsysteme under the ownership of Ingo Volckmann in 2002. Today the company manufactures ultra-modern ventilation systems with and without heat recovery. The core competencies of LUNOS lie in controlled decentralised residential ventilation with and without heat recovery as well as in the development and manufacture of energy-efficient fans and outer wall air vents. LUNOS is the market leader in decentralised residential ventilation and continues to be on course for growth: In recent years the company has achieved such a high increase in turnover that the construction of a new, larger production site became necessary. With this site, LUNOS is well positioned to continue its positive development for years to come. LUNOS has always manufactured its products exclusively Made in Germany, but today these products can be purchased all over the world.

The company LUNOS participated in the project "Vile na Brodu". The project includes the construction of five two-apartment villas with parking roofs as well as the communal and external arrangement. Within the project the LUNOS system of ventilation of living space buildings with recuperation and the ventilation of bathrooms were used. The realisation of the project lasted 15 months.

# LUNOS Lüftungstechnik GmbH: Vile na Brodu

LUNOS Lüftungstechnik GmbH - takrat LUNOS Lüftung - je nastal leta 1959 iz družinskega podjetja gradbenega izvajalca in arhitekta Benna Schöttlerja, ki je od leta 1949 izdeloval prezračevalne jaške in opeko in se nato osredotočil na razvoj majhnih ventilatorjev za bivalne prostore. Za nov razvoj je bil odgovoren interni urad za načrtovanje in razvoj.

Podjetje je ostalo zvesto načelu lastnega razvoja in proizvodnje v Nemčiji tudi po tem, ko se je leta 2002 preimenovalo v LUNOS Lüftungstechnik GmbH für Raumluftsysteme in je bilo v lasti Inga Volckmanna. Danes proizvaja ultra moderne prezračevalne sisteme z rekuperacijo toplote in brez nje. LUNOS se osredotoča na nadzorovano decentralizirano prezračevanje stanovanj z rekuperacijo toplote (in brez nje) ter na razvoj in proizvodnjo energetsko učinkovitih ventilatorjev in zračnih odprtih za zunanje stene. LUNOS je vodilni na trgu decentraliziranega prezračevanja stanovanj in kar naprej raste: v zadnjih letih je podjetje doseglo tako visok porast prometa, da je bila potrebna gradnja novega večjega proizvodnega obrata. S tem obratom je LUNOS v dobrem položaju, da si s tem omogočajo pozitiven razvoj tudi v prihodnjih letih. LUNOS je svoje izdelke vedno proizvajal izključno Made in Germany, danes pa jih je mogoče kupiti po vsem svetu.

Podjetje LUNOS je sodelovalo pri projektu »Vile na Brodu«. Projekt obsega zgradbo pet dvostanovanjskih vil z nadstreški za parkiranje in pripadajočo komunalno ter zunanjo ureditvijo. Uporabljen je bil Lunosov sistem prezračevanja stavb bivalnih prostorov z rekuperacijo in Lunosov sistem prezračevanja kopalnic. Izvedba je trajala 15 mesecev.



### Reference Project / Referenčni projekt

K2 Sytems GmbH: Installation of the MFE solar power plant Veno Pilon High School  
K2 Sytems GmbH: Postavitev sončne elektrarne MFE srednja šola Veno Pilon

### Year of Implementation / Leto izvedbe

2019

### Key Characteristics / Glavne karakteristike

- solar power plant MFE SŠ VENO PILON 1 on the student dormitory building / postavitev sončne elektrarne MFE SŠ VENO PILON 1 na objektu dijaškega doma
- solar power plant MFE SŠ VENO PILON 2 on the school building/ postavitev sončne elektrarne MFE SŠ VENO PILON 2 na objektu šole
- Luxor's K2 Systems construction with standard elements / Luxorjeva konstrukcija K2 Systems s tipskimi elementi
- construction of the power plant in the wind zone 3 / izvedba elektrarne v vetrni coni 3
- the special anchoring of the structure with chemical anchoring to the building / posebno sidranje konstrukcije s kemičnim sidranjem na objekt
- Modules: Luxor LX-300M/156-60 + and a 300 Wp single crystal / Moduli : Luxor LX-300M/156-60+ ter monokristal moči 300 Wp

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## **K2 Sytems GmbH: Installation of the MFE solar power plant Veno Pilon High School**

At Luxor, they are fascinated by the magic of the sun. Just a few rays of sunlight are enough to make us humans happy. The sun also gives us energy in other ways - and in almost inexhaustible quantities. In order to convert your light into electrical energy and to supply their clients with branded solar modules in the best German engineering quality, they founded LUXOR SOLAR GmbH in 2007. The company prides itself with more than a decade of expertise in development and production of solar modules. They are active in over 70 countries and offer a unique range of solar modules.

## **K2 Sytems GmbH: Postavitev sončne elektrarne MFE srednja šola Veno Pilon**

V Luxorju jih očara čarobnost sonca. Menijo, da je že nekaj sončnih žarkov dovolj, da smo ljudje srečni. Sonce nam energijo daje tudi na druge načine - v skoraj neizčrpnih količinah. Da bi pretvorili svetlobo v električno energijo in svojim strankam dobavili blagovne znamke sončnih modulov v najboljši nemški inženirski kakovosti, je bilo leta 2007 ustanovljeno podjetje LUXOR SOLAR GmbH. Podjetje se ponaša z več kot desetletnim strokovnim znanjem na področju razvoja in proizvodnje sončne energije. Delujejo v več kot 70 državah in ponujajo edinstveno paleto solarnih modulov.

Longevity, reliability and strict standards are particularly important to the company and its founder Volker Leh. These also apply to their licensed partner productions in Asia and Europe, which sustainably manufacture Luxor modules. With great success. Eco Line 60, Eco Line 72 and Solo Line 36 are in reliable use everywhere in the international solar markets. On private houses, commercial buildings, barns, stables and in open fields. With the experience of an installed capacity of more than 4.7 million solar modules in more than 70 countries, the headquarters in Stuttgart and their branches in Shanghai and Tokyo, they are working on energy concepts for a better tomorrow. Because one thing is certain: sunshine for the next 5 billion years.

Luxor supported the installation of the solar power plant MFE SŠ VENO PILON 1 on the student dormitory building and the solar power plant MFE SŠ VENO PILON 2 on the school building. Luxor's K2 Systems construction with standard elements was used. What stands out is the construction of the power plant in the wind zone 3 and the special anchoring of the structure with chemical anchoring to the building. The modules used were Luxor LX-300M/156-60 + and a 300 Wp single crystal. 288 modules were used for the project.

Dolgotrajnost, zanesljivost in strogi standardi so še posebej pomembni za podjetje in njegovega ustanovitelja Volkerja Leha. To velja tudi za njihove licenčne partnerske proizvodnje v Aziji in Evropi, ki trajnostno izdelujejo sončne module. Pri tem so zelo uspešni. Eco Line 60, Eco Line 72 in Solo Line 36 se zanesljivo pojavljajo na mednarodnih sončnih trgih. Na zasebnih hišah, poslovnih zgradbah, hlevih, hlevih in na odprtih poljih. Z nameščeno zmogljivostjo več kot 4,7 milijona sončnih modulov v več kot 70 državah, s sedežem v Stuttgartu in njihovimi podružnicami v Šanghaju in Tokiu si v Luxorju prizadevajo za energetske koncepte za boljši jutri. Ker so prepričani v sonce za naslednjih 5 milijard let.

Podjetje Luxor je podprlo postavitev sončne elektrarne MFE SŠ VENO PILON 1 na objektu dijaškega doma in sončne elektrarne MFE SŠ VENO PILON 2 na objektu šole. Pri tem je bila uporabljena Luxorjeva konstrukcija K2 Systems s tipskimi elementi. Kar izstopa, je izvedba elektrarne v vetrni coni 3 in posebno sidranje konstrukcije s kemičnim sidranjem na objekt. Uporabljeni moduli so Luxor LX-300M/156-60+ ter monokristal moči 300 Wp. Za projekt so porabili 288 modulov.



### Reference Project / Referenčni projekt

Viessmann Climate Solutions SE: Central energy system, Ljubljana Jože Pučnik Airport  
Viessmann Climate Solutions SE: Centralni energetska sistem na letališču Jožeta Pučnika

### Year of Implementation / Leto izvedbe

2019

### Key Characteristics / Glavne karakteristike

- Supply with heating and cooling energy / oskrba celotnega letališkega kompleksa z ogrevalno in hladilno energijo
- Viessman gas boilers for the heat supply / Za oskrbo s toploto nameščeni novi plinski kotli Viessman
- heat demand covered by special Vitocrossal 200 condensing boilers / Večino potrebe po toploti pokrivajo posebni kondenzacijski kotli Vitocrossal 200
- peak heat demand covered by a special Vitoplex 200 low-temperature boiler / najvišjo potrebo po toploti pokriva poseben nizkotemperaturni kotel Vitoplex 200
- energy efficient (lower fuel consumption), environmentally friendly (fewer harmful emissions) and more economical (lower operating costs) to operate / delovanje energetska učinkovitejše (manjša poraba goriva), okolju prijaznejše (manj škodljivih emisij) in bolj ekonomično (nižji obratovalni stroški)

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## Viessmann Climate Solutions SE: Centralni energetska sistem na letališču Jožeta Pučnika

Viessmann is a global family business. The company is shaped by the Viessmann family of entrepreneurs and thrives off the multifaceted talents of their members. Viessmann, which was founded in 1917, now has 22 production companies in twelve countries. The company is represented around the world with 120 sales branches and generated approx. 2.65 billion euros in turnover in 2019. Today, the Viessmann Group has 12 300 employees worldwide. In 2019, they restructured their organization during their 102nd year of existence. Viessmann combined their six business areas and the Viessmann foundations under the umbrella of the Viessmann Family Holding.

Viessmann develops seamless climate and energy solutions that provide the environment with the

## Viessmann Climate Solutions SE: Central energy system, Ljubljana Jože Pučnik Airport

Viessmann je globalno družinsko podjetje. Podjetje oblikuje družina podjetnikov Viessmann in uspeva zaradi raznolikih talentov njihovih članov. Viessmann je bil ustanovljen leta 1917 in ima danes 22 proizvodnih podjetij v dvanajstih državah. Podjetje je zastopano po vsem svetu s 120 prodajnimi poslovalnicami in ustvarilo približno 2,65 milijarde evrov prometa leta 2019. Danes ima skupina Viessmann 12 300 zaposlenih po vsem svetu. Leta 2019 so svojo organizacijo preoblikovali v znamenju svojega 102. leta obstoja. Viessmann je tako svojih šest poslovnih področij in fundacije Viessmann združil pod okriljem družinskega holdinga Viessmann.

Viessmann razvija brezhibne podnebne in energetske rešitve, ki v enaki meri zagotavljajo okolju optimalno

optimum room temperature, hot water, electricity, and good air quality in equal measure. Their guiding principle is to positively create the living spaces for generations to come. In an integrated range of solutions, they seamlessly connect products and systems based on the right energy sources via platforms and digital services. Viessmann also offers a wide range of additional services. Innovation is part of their DNA: more than 1500 patents and property rights are registered to the Viessmann Group. They already achieved the federal government's climate protection targets for 2050 in 2012. Their responsible actions can be found in their sustainability strategy.

In order to supply the entire airport complex with heating and cooling energy, a central energy system was built for the Jože Pučnik Airport. The construction of the corresponding energy infrastructure (electricity, water and gas supply, heating, cooling) was also carried out as part of the project.

The system is currently used to supply heat to the facilities in the airport complex, while also providing space for the installation of refrigeration room equipment that will be installed in the future. New Viessman gas boilers have been installed for the heat supply. Most of the heat demand is covered by special Vitocrossal 200 condensing boilers, which also use the condensing heat from flue gases. This technology increases fuel efficiency while reducing emissions. The peak heat demand is covered by a special Vitoplex 200 low-temperature boiler, which is only switched on in extreme weather conditions and therefore has a small share in the total heat production. The heat generation is managed by a controller that cascades the boilers. The heat is mainly generated by the condensing boiler. As a result, it is more energy efficient (lower fuel consumption), environmentally friendly (fewer harmful emissions) and more economical (lower operating costs) to operate.

sobno temperaturo, toplo vodo, elektriko in dobro kakovost zraka. Njihovo vodilo je pozitivno ustvarjanje življenjskih prostorov za prihodnje generacije. V svoji paleti rešitev brez težav povezujejo izdelke in sisteme, ki temeljijo na pravih virih energije, prek platform in digitalnih storitev. Viessmann ponuja tudi širok izbor dodatnih storitev. Inovacije so nepogrešljiv del njihove zgodbe. Skupina Viessmann je registrirala več kot 1500 patentov in lastninskih pravic. Podnebne cilje nemške zvezne vlade do leta 2050 so dosegli že leta 2012. Njihove iniciative so dostopne v njihovi trajnostni strategiji.

Za letališče Jožeta Pučnika je bil zgrajen centralni energetska sistem za oskrbo celotnega letališkega kompleksa z ogrevalno in hladilno energijo. V okviru projekta je bila izvedena tudi gradnja ustrežne energetske infrastrukture (oskrba z elektriko, vodo in plinom, ogrevanje, hlajenje).

Trenutno se sistem uporablja za oskrbo objektov v letališkem kompleksu s toploto, hkrati pa zagotavlja prostor za vgradnjo opreme hladilnic v prihodnosti. Za oskrbo s toploto so nameščeni novi plinski kotli Viessman. Večino potrebe po toploti pokrivajo posebni kondenzacijski kotli Vitocrossal 200, ki prav tako uporabljajo kondenzacijsko toploto iz dimnih plinov. Ta tehnologija povečuje učinkovitost porabe goriva in hkrati zmanjšuje emisije. Najvišjo potrebo po toploti pokriva poseben nizkotemperaturni kotel Vitoplex 200, ki je vklopljen le v ekstremnih vremenskih razmerah in ima zato majhen delež v celotni proizvodnji toplote. Proizvodnjo toplote nadzoruje krmilnik, ki jo razvršča v kotle. Toploto večinoma ustvarja kondenzacijski kotel. Zato je delovanje energetska učinkovitejša (manjša poraba goriva), okolju prijaznejša (manj škodljivih emisij) in bolj ekonomična (nižji obratovalni stroški).





– weishaupt –

#### Reference Project / Referenčni projekt

Max Weishaupt GmbH: Aparthotel Stare  
Max Weishaupt GmbH: Aparthotel Stare

#### Year of Implementation / Leto izvedbe

2019/2020

#### Key Characteristics / Glavne karakteristike

- Installation of new hotel Equipment / Namestitve nove hotelske opreme
- 2x heat pumps (WWP S 35), brine/water with an output of 35 kW/unit. The HP work on the water/water regime and thus an output of approx. 90 kW is achieved. / 2x toplotne črpalke (WWP S 35), slanica/voda z močjo 35 kW/enotoToplotna črpalka deluje na režim voda/voda in s tem doseže približno Doseženih je 90 kW.
- 1x gas condensing boiler WTC-GW 100, which covers peak loads. / 1x plinski kondenzacijski kotel WTC-GW 100, ki pokriva največje obremenitve.
- 1x WES 1000, 2x energy storage device WES CAS 800, 1x energy storage device WES CAS 1000 / 1x WES 1000, 2x naprava za shranjevanje energije WES CAS 800, 1x naprava za shranjevanje energije WES CAS 1000
- 2x WHI Freshaqua for hot water preparation with a capacity of 44l/minute / 2x WHI Freshaqua za pripravo tople vode s kapaciteto 44l/min
- 1x WHI Freshaqua for hot water preparation with a capacity of 55l/minute / 1x WHI Freshaqua za pripravo tople vode s kapaciteto 55l/minuto

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## Max Weishaupt GmbH: Aparthotel Stare

Weishaupt is a long-established company. The company has been building and developing heating technology in Schwendi for almost 70 years. Started off with an oil burner, Weishaupt now has extensive know-how in the fields of energy technology, generation and management.

In the Weishaupt research and development centre, around 100 highly specialized technicians, designers and engineers develop innovative heating technology through to series production. This is where the foundation for reliable Weishaupt technology is laid.

Their claim is highest quality and precision. The know-how of their qualified employees is in every product and is the prerequisite for a successful expansion of the company. At Weishaupt, only really well-engineered devices and accessories come onto the market in order to do their job for customers reliably. For Weishaupt, good service is an important part of their extensive range of services. Competent specialists are there for their specialist customers - your heating contractor - whenever they are needed. With regular training courses for their specialist partners, service technicians and employees, they always ensure that the service works reliably.

Weishaupt was part of the project "Apart Hotel Stare". They have installed the following equipment in the building, in which prior to the project realisation the heating and hot water preparation used heating oil as an energy source.

- 2x heat pumps (WWP S 35), brine/water with an output of 35 kW/unit. The HP work on the water/water regime and thus an output of approx. 90 kW is achieved.
- 1x gas condensing boiler WTC-GW 100, which covers peak loads.
- 1x WES 1000, 2x energy storage device WES CAS 800, 1x energy storage device WES CAS 1000
- 2x WHI Freshaqua for hot water preparation with a capacity of 44l/minute and
- 1x WHI Freshaqua for hot water preparation with a capacity of 55l/minute

## Max Weishaupt GmbH: Aparthotel Stare

Weishaupt je že dolgo uveljavljeno podjetje. Podjetje že skoraj 70 let gradi in razvija ogrevalno tehnologijo v Schwendiju. Weishaupt, ki je začel z oljnim gorilnikom, ima zdaj široko znanje na področju energetske tehnologije, proizvodnje in upravljanja.

V raziskovalnem in razvojnem centru Weishaupt približno 100 visoko specializiranih tehnikov, oblikovalcev in inženirjev razvija inovativno ogrevalno tehnologijo do serijske proizvodnje. Tu so postavljeni temelji, ki omogočajo Weishauptovo zanesljivo tehnologijo.

Njihov cilj je zagotoviti najvišjo kakovost in natančnost. Znanje njihovih usposobljenih zaposlenih se odraža v vsakem izdelku in je predpogoj za uspešno širitev podjetja. Pri Weishauptu na trg prihajajo le resnično dobro izdelane naprave in dodatki, ki njihovim strankam zagotovijo zanesljivo opravljanje dela. Za Weishaupt je dobra storitev pomemben del njihove široke ponudbe. Pristojni strokovnjaki so vedno na voljo strokovnim strankam - vašemu izvajalcu ogrevanja. Z rednimi tečaji usposabljanja za svoje strokovne partnerje, serviserje in zaposlene vedno zagotavljajo zanesljivo delovanje storitve.

Podjetje Weishaupt je v letih 2019/2020 sodelovalo pri projektu »Apart Hotel Stare«. V stavbo, v kateri so pred izvedbo projekta za ogrevanje in pripravo tople vode kot energent uporabljali kurilno olje, so namestili naslednjo opremo:

- 2x toplotne črpalke (WWP S 35), slanica/voda z močjo 35 kW/enotoToplotna črpalka deluje na režim voda/voda in s tem doseže približno Doseženih je 90 kW.
- 1x plinski kondenzacijski kotel WTC-GW 100, ki pokriva največje obremenitve.
- 1x WES 1000, 2x naprava za shranjevanje energije WES CAS 800, 1x naprava za shranjevanje energije WES CAS 1000
- 2x WHI Freshaqua za pripravo tople vode s kapaciteto 44l/min
- 1x WHI Freshaqua za pripravo tople vode s kapaciteto 55l/minuto

#### Reference Project | Referenčni projekt

Knauf Insulation Experience Center – Training and Education Centre in Škofja Loka, Slovenia (KIEXC)  
Knauf Insulation SPRL: Knauf Insulation demonstracijsko-izobraževalni center

#### Year of Implementation | Leto izvedbe

2017/2018

#### Key Characteristics | Glavne karakteristike

- Training and Education Centre in Škofja Loka | Demonstracijsko-izobraževalni center
- Demonstrate, educate, create better Buildings | Izobraževanje, ustvarjanje boljših stavb
- Event Organisation | Organiziranje dogodkov
- A2 Energy class | A2 energetska razred

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[www.knaufinsulation.com](http://www.knaufinsulation.com)

## Knauf Insulation SPRL: Knauf Insulation Experience Center

Knauf Insulation has more than 40 years of tradition and is one of the fastest growing and most respected names in insulation worldwide. We are committed to helping our customers to meet the increasing demand for energy efficiency and sustainability in homes, non-residential buildings, and industrial applications. With around 5,500 employees in more than 40 countries and 27 manufacturing sites in 15 countries Knauf Insulation realized turnover of around €2 billion. Our corporate values are commitment, entrepreneurship, partnership and "Menschlichkeit", and our guiding principles are: Challenge. Create. Care. We aim to be leaders in the area service excellence, quality excellence and real performance in construction, so we create high-performing, long-lasting, and innovative solutions. At the heart of everything we do, we always put sustainability.

Knauf Insulation executed the Project "Knauf Insulation Experience Center – Training & Education Centre in Škofja Loka, Slovenia (KIEXC)".

KIEXC, located in Škofja Loka, is owned by Knauf Insulation and it is a case study of sustainable construction on the European level. The building itself was designed from very beginning to demonstrate our pioneering approach to the future of sustainable building. We followed all sustainable certification/ DGNB requests from projecting to construction and also using phases and result was Platinum DGNB (German model for sustainable construction evaluation).

In addition to be demonstration and training centre for our and partners solutions, KIEXC is also an excellent venue for variety of events for diverse clients. KIEXC can host conferences, seminars, business and social meetings, training courses, press conferences, presentations, team buildings or any other tailored event to suit customer's particular needs.

## Knauf Insulation SPRL: Knauf Insulation demonstracijsko- izobraževalni center

Knauf Insulation ima več kot 40-letno tradicijo in je eno najhitreje rastočih in najbolj cenjenih imen na področju izolacije po vsem svetu. Podjetje se zavezuje, da bo strankam pomagalo zadovoljiti naraščajoče povpraševanje po energetski učinkovitosti in trajnosti v domovih, nestanovanjskih stavbah in industrijski uporabi. Knauf Insulation je s približno 5.500 zaposlenimi v več kot 40 državah in 27 proizvodnimi obrati v 15 državah ustvaril približno 2 milijardi EUR prometa. Njihove korporativne vrednote so zavzetost, podjetnost, partnerstvo in človeškost, naša vodilna načela pa so: Challenge. Create. Care. Njihov cilj je biti vodilni na področju odličnosti storitev na področju kakovosti, odličnosti in resničnih zmogljivosti v gradbeništvu, zato ustvarjajo visoko zmogljive, dolgotrajne in inovativne rešitve. V središče vsega, kar počnejo, vedno postavljajo trajnost.

Podjetje Knauf Insulation izvaja projekt „Knauf Insulation Experience Center - Izobraževalni in izobraževalni center v Škofji Loki, Slovenija (KIEXC)".

KIEXC, s sedežem v Škofji Loki, je v lasti podjetja Knauf Insulation in gre za študijo primera trajnostne gradnje na evropski ravni. Sama stavba je bila zasnovana že od samega začetka, da bi pokazala naš pionirski pristop k prihodnosti trajnostne gradnje. Sledili so vsem zahtevam za trajnostno certificiranje DGNB od projektiranja do gradnje in tudi z uporabo faz, rezultat pa je bil Platinum DGNB (nemški model za vrednotenje trajnostne gradnje).

Poleg tega, da je KIEXC demonstracijski in izobraževalni center za njihove in partnerske rešitve, je tudi odlično prizorišče za različne prireditve za različne stranke. KIEXC lahko gosti konference, seminarje, poslovna in družabna srečanja, tečaje, usposabljanja, tiskovne konference, predstavitve, team buildinge ali katere koli druge prireditve po meri, ki ustrezajo potrebam strank.

KIEXC is also in line with Knauf Insulation sustainable strategy – For a Better world. It fits perfectly to fulfil activities on its two pillars – with KIEXC we demonstrate, educate and create better buildings for future. On the other side, personal approach, which can be offered through KIEXC also shows our commitment to put all types of people first – customers, employees, local & regional community. In the first year of KIEXC operating we realised over 200 events of different type in it.

KIEXC je tudi v skladu s trajnostno strategijo Knauf Insulation – Za boljši svet. Popolnoma se prilega izvajanju dejavnosti na dveh stebrih – s KIEXC prikazujejo, izobražujejo in ustvarjajo boljše stavbe za prihodnost. Po drugi strani pa osebni pristop, ki ga lahko ponudijo prek KIEXC, kaže tudi njihovo zavezanost, da bodo na prvo mesto postavili vse vrste ljudi – stranke, zaposlene, lokalno in regionalno skupnost. V prvem letu delovanja KIEXC so v njem realizirali več kot 200 različnih dogodkov.





#### Reference Project / Referenčni projekt

Menerga München: The Kamnitnik low-energy kindergarten project  
Menerga München: Nizkoenergetski vrtec Kamnitnik

#### Year of Implementation / Leto izvedbe

2017-2019

#### Key Characteristics / Glavne karakteristike

- klimatska naprava tipa ADCONAIR / air conditioning unit ADCONAIR
- klimatska naprava tipa ADSOLAIR / air conditioning unit ADSOLAIR
- hibridna toplotna črpalka REWATEMP / hybrid heat pump REWATEMP
- letna raba primarne energije za ogrevanje in hlajenje (brez STV) / annual primary energy consumption for heating and cooling (without SWH): 394.564 kWh
- letna raba primarne energije za ogrevanje iz obnovljivih virov / annual primary energy consumption for heating using RES: 81.546 kWh
- letna raba primarne energije za ogrevanje STV iz obnovljivih virov / annual primary energy consumption for SWH using RES: 21.707 kWh

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## Menerga München: The Kamnitnik low-energy kindergarten project

Menerga is a high-tech engineering company with over 700 reference projects and 80 associates which have helped it become a synonym for energy efficiency in air conditioning, ventilation, heating, and cooling. Using its own systems, it works to reduce the energy consumption and energy demand of new and existing buildings. With its slogan »We create green buildings«, it is gradually realising its vision of becoming the largest supplier of GreenBuilding solutions in the Adriatic region. It functions as an energy one-stop-shop, offering investors, engineers, and architects everything they need to optimise the energy performance of buildings in one place. Its two prized products which the company developed itself are the Rewatemp hybrid heat pump and the HydroTemp energy and hydraulic module which combine to form a comprehensive solution for buildings, allowing the use of a renewable energy source – a shallow geothermal energy well.

The Company Menerga executed the project »Low-energy Kindergarten Kamnitnik«. For the purpose of ventilating and cooling the kindergarten premises, Menerga installed the ADCONAIR air conditioning unit (supplied by the German partner), which offers

## Menerga München: Nizkoenergetski vrtec Kamnitnik

Menerga je visoko tehnološko inženiring podjetje, ki je z več kot 700 referenčnimi projekti in 80 sodelavci postalo sinonim za energetske učinkovitost na področju klimatizacije, prezračevanja, ogrevanja in hlajenja. V novogradnjah in obstoječih zgradbah z lastnimi sistemi poskrbijo za zmanjševanje porabe energije in potrebe po energiji. »Ustvarjamo zelene zgradbe« je njihov slogan, ki jih vodi na poti, da postanejo največji ponudnik »GreenBuilding« rešitev v jadranski regiji. S svojimi storitvami delujejo kot energetski »one-stop-shop«, saj investitorjem, projektantom in arhitektom na enem mestu zagotavljajo vse za energetske optimizacije zgradb. Menergina paradna konja, ki sta plod lastnega razvoja, sta hibridna toplotna črpalna Rewatemp ter energetski in hidravlični modul Hydrotemp, ki skupaj z napravo Rewatemp tvori celostno rešitev za stavbo, da lahko ta začne – kot dragocen obnovljiv vir energije – izkoriščati plitvo geotermalno energijo.

Podjetje Menerga je izvedlo projekt »Nizko energetski vrtec Kamnitnik«. Za prezračevanje in hlajenje prostorov vrta je vgrajena klima naprava tipa ADCONAIR nemškega partnerja z visoko učinkovito rekuperacijo pozimi in poleti z integriranim hlapilnim

energy efficient heat recovery in winter and in summer with integrated evaporative cooling. For the purposes relating to the kitchen technologies, the company used the same technology, this time using the ADSOLAIR unit. The heat recovery units (recuperators) are made of polypropylene, which is fully non-corrosive. The ventilator technology is state-of-the-art and includes energy-efficient EC fan motors with digital air flow measurements. The regulation technology regulates the ventilation devices depending on the time and CO<sub>2</sub> concentration in the spaces (CO<sub>2</sub> regulation), with the devices making automatic adaptations with appropriate amounts of air. The production of the thermal and cooling energy to be used in heating, cooling, and ventilation is based on 100% renewable sources (a shallow geothermal energy well). With a maximum priority use of free-cooling with the help of the REWATEMP hybrid heat pump – developed by Slovenian experts – which combines the production of thermal and cooling energy and the heating and reheating of sanitary hot water. The applying project features two Menerga München devices (ADCONAIR 76, ADSOLAIR 56) and the Slovene Menerga's REWATEMP. In terms of achieving energy efficiency, this is a winning combination and a product of the German-Slovene technological partnership.

hlajenjem. Za potrebe tehnologije kuhinje je uporabljena ista tehnologija z napravo ADSOLAIR. Enote za vračanje energije (rekuperatorji) so iz korozijsko popolno obstojnega materiala polipropilena. Ventilatorska tehnika je najsodobnejša s prostotekočimi kolesi EC-motorji z visokim učinkom in digitalnim merjenjem pretoka zraka. Regulacijska tehnika upravlja prezračevalne naprave glede na časovne potrebe in obremenitve prostorov (CO<sub>2</sub> regulacija), pri čemer se naprave avtomatsko prilagajajo s količino zraka. Priprava toplotne in hladilne energije za potrebe ogrevanja, hlajenja in prezračevanje je zasnovana na obnovljivih virih (plitva geotermalna energija – vrtina) z maksimalnim prioritarnim izkoriščanjem pasivnega hlajenja (»freecooling«) na osnovi hibridne toplotne črpalke tipa REWATEMP – plod slovenskega razvoja –, ki v sebi združuje proizvodnjo toplotne in hladilne energije ter ogrevanje in pregrevanje sanitarne tople vode. Pri projektu sta vključeni dve napravi proizvajalca Menerga München (ADCONAIR 76, ADSOLAIR 56) ter naprava Menerga Rewatemp slovenske Menerge. V zasledovanju energetske učinkovitosti gre torej tukaj za zmagovalno kombinacijo nemško-slovenskega tehnološkega partnerstva.



## German-Slovene Chamber of Commerce (AHK Slowenien)

The German-Slovene Chamber of Commerce (AHK Slowenien) is part of the global network of German Chambers of Commerce Abroad (AHK), located at 140 locations in 92 countries. AHK Slowenien was established in 2006 as the successor to the Delegation Office, established in 1996. With more than 270 members, it is the largest bilateral organization in Slovenia. Since its establishment AHK Slowenien has been the first address for German companies and associations regarding the information on the Slovenian market and the first address for Slovenian companies and associations regarding the information on the German market. The subsidiary Deslo d. o. o. offers members and customers a wide range of services. We are the official representative of the German economy, a member organization and a service provider for companies.

### The mission of the Chamber

**Official representation of the German economy:**  
Our mission is to represent German business interests in Slovenia, where we inform and promote Germany as a business destination.

### Membership organizations:

Members of the German-Slovene Chamber of Commerce and Industry include companies that are active in bilateral economic relations. Members are the foundations on which chambers act concerning politics, economy and governmental organizations to promote bilateral economic relations.

## Slovensko-nemška gospodarska zbornica (AHK Slovenija)

Slovensko-nemška gospodarska zbornica (AHK Slovenija) je del svetovne mreže nemških gospodarskih zbornic v tujini (AHK), ki se nahajajo na 140 lokacijami v 92 državah. Ustanovljena je bila leta 2006 kot naslednica delegacijskega urada, ustanovljenega leta 1996. Z več kot 270 člani je največja bilateralna organizacija v Sloveniji. AHK Slovenija je prvi naslov za nemška podjetja in združenja glede informacij o slovenskem trgu in prvi naslov za slovenska podjetja ter združenja glede informacij o nemškem trgu. V okviru hčerinskega podjetja Deslo d. o. o. pa svojim članom in strankam nudimo širok nabor storitev. Smo uradno predstavništvo nemškega gospodarstva, članska organizacija in ponudnik storitev za podjetja.

### Poslanstvo

**Uradno zastopništvo nemškega gospodarstva:**  
Naša naloga je, da zastopamo nemške gospodarske interese v Sloveniji, kjer informiramo in promoviramo Nemčijo kot gospodarsko destinacijo.

### Članske organizacije:

Med člane Slovensko-nemške gospodarske zbornice spadajo podjetja, ki aktivno sodelujejo v bilateralnih gospodarskih odnosih. Člani so temelji, na katerih zbornice nastopajo v odnosu s politiko, gospodarstvom in vladnimi organizacijami za spodbujanje bilateralnih gospodarskih odnosov.

## Services:

The German-Slovene Chamber of Commerce and Industry offers German and Slovene companies support services for their business endeavors abroad. The Chamber offers the following services: Assistance on entering the German market, assistance with effective appearances at German trade fairs, legal and fiscal services as well as various seminars and workshops that prepare your business for an expansion of activities on the German market.

## Ponudnik storitev za podjetja:

Nemške zunanje gospodarske zbornice nudijo nemškim podjetjem in državam gostiteljicam storitve za podporo pri zunanje gospodarskih poslih. Slovensko-nemška gospodarska zbornica nudi nemškim in slovenskim podjetjem storitve za podporo pri zunanje gospodarskih poslih. V zbornici nudimo sledeče storitve: pomoč pri vstopu na nemški trg, pomoč pri učinkovitem nastopu na nemških sejmih, pravne in davčne storitve ter razne seminarje in izobraževanja, ki vas pripravijo na uspešno poslovanje in širitev dejavnosti na nemškem trgu.



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