



Deutsches Wirtschaftsbüro  
German Trade Office  
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德國經濟辦事處



MITTELSTAND  
**GLOBAL**  
ENERGY SOLUTIONS  
MADE IN GERMANY



# ENERGY EFFICIENCY IN BUILDINGS

## GERMAN DELEGATION TO TAIWAN 2018

### 建築能源效率

### 2018德國訪台代表團

[www.german-energy-solutions.de](http://www.german-energy-solutions.de)



Baden-Württemberg International

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Scientific Cooperation

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林百科  
首席代表暨處長  
德國經濟辦事處

因應全球暖化之挑戰，世界各國政府皆致力於減少二氧化碳排放量。台灣政府規劃具雄心壯志的目標：在2050年前將碳排放量降至2005年水準之一半，實現目標的政策之一即在2025年將可再生能源發電比例由現今的5%提高至20%。

然而，改變發電方式並非減少二氧化碳排放之唯一方法。高效使用能源變得越發重要。2013年，台灣27%的碳排放總量來自建築行業，而僅用於空調系統的家庭的初級能源消耗總量即佔約31%。因此，台灣在執行具成本效益的節能措施方面具強大潛力，而這些措施能達成減少溫室氣體排放之目標。

通過使用高品質材料與最新節能技術，建築物之運營成本能大幅降低。「德國製造」之品質在台灣受到高度重視與讚賞，雙方數十年來一直是彼此重要貿易夥伴。因此，實施建築節能之相關計畫能為德國與台灣在此領域中提供更密切之合作機會，並具互惠互利之成效。

德國經濟辦事處與德國聯邦經濟與能源部合作，特邀請四家知名德國企業與兩名在建築節能材料領域享有盛名之德國官方代表來台，分享其在建築節能措施方面之專業知識與建樹。

我們堅信此次代表團參訪行程必將加強雙方經濟交流，彼此協助台灣推動節能計畫。

預祝大會順利成功



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**Axel Limberg**  
**Chief Representative and Executive Director**  
**German Trade Office Taipei**

As the world is facing the current challenges of global warming, governments all over the world increase their efforts to reduce carbon dioxide emissions. The Taiwanese government has set the goal to reduce carbon emissions by 50% below 2005 levels by 2050 and one part of the implementation strategy is to increase the proportion of electricity production from renewable sources from today's 5% to 20% by 2025.

However, changing the process of generating electric power is not the only way to reduce carbon emissions. Efficient energy use is becoming increasingly important. Around 27% of Taiwan's total carbon emissions were caused in the buildings sector in 2013 and the primary energy consumption in households used for air conditioning systems alone accounts for a total of around 31%. Taiwan thus has a great potential in implementing cost-effective energy conservation measures that can play an important part in contributing to the reduction of greenhouse gas emissions.

By using high quality materials and the latest energy saving technology, operational costs in buildings can be drastically reduced. The term "Quality Made in Germany" is highly valued and appreciated in Taiwan and both countries have been important trade partners for several decades already. The implementation of energy-efficiency measures thus offers a great chance for a closer cooperation between Germany and Taiwan in this sector and can lead to a mutual benefit.

Therefore, in partnership with the German Federal Ministry of Economic Affairs and Energy, we have invited four renowned German companies and two official German representatives active in the field of energy efficient materials for buildings to Taiwan, to share their expertise on energy conservation measures in buildings.

We strongly believe that this delegation visit will strengthen the ties between the two economies and boost energy efficiency projects in Taiwan.

I wish you an engaging conference and successful meetings.

# 代表團簡介

德國能源出口倡議專案乃與德國行業協會共同協調，作為諮詢委員會成員，交由德國工商總會（AHKs）、德國能源協會（dena）、德國國際合作機構（GIZ）與其他國際合作夥伴、服務執行單位所共同擘劃執行。

德國聯邦經濟暨能源部每年撥列1850萬歐元的預算，針對德國能源出口倡議專案策劃約170場相關活動，近1600間德國企業共同響應。在德國政府成功推廣下，德國在智慧可再生能源產業領域之技術領先全球，其中更涵蓋數千家專精於可再生能源系統、節能效率解決方案、智慧電網與存儲技術生產開發之德國中小企業。

德國經濟辦事處服務執行單位—博智顧問有限公司，與巴登符騰堡邦國際經濟與科技合作協會以「建築節能」為主題，共同籌組德國商務訪台代表團。

參訪活動：

## 1. 台德綠建築論壇

日期：2018年11月20日

地點：台北西華飯店

代表團參訪行程始於在台北西華飯店所舉行的「台德綠建築論壇」，論壇由巴登符騰堡邦國際經濟與科技合作協會、內政部建築研究所與內政部營建署所協助舉辦。誠摯歡迎台灣各行各業企業先進蒞臨論壇，針對建築節能此議題相互交流。

## 2. 企業一對一會談

日期：2018年11月21日至23日

地點：全台各地

藉由一對一拜會台灣當地企業，並安排為期三天之商務會議行程，台德雙方得以更為深入的就建築節能與能源效率等議題進行交流，並為雙方未來合作奠下契機。

# Introduction of the Delegation

The German Energy Solutions Initiative is implemented in coordination with German industry associations as members of the advisory council and in cooperation with partners such as the German Chambers of Commerce Abroad (AHKs), the German Energy Agency (dena), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and further international project partners and service providers.

Around 1600 companies participate in around 170 events and projects every year. The annual budget of the German Energy Solutions Initiative amounts to €18.5 million. The promotion of smart and sustainable energy 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 specialized in the development, design and production of renewable energy systems, energy efficiency solutions, smart grids and storage technologies.

DEinternational Taiwan Ltd., service unit of the German Trade Office Taipei and Baden-Württemberg International are jointly organizing a business delegation visit focusing on energy efficiency in buildings.

## **Delegation Program:**

### **1. German-Taiwanese Green Building Conference**

**Date:** November 20th, 2018

**Venue:** The Sherwood Taipei

The delegation visit will start off with a joint conference at the Sherwood Taipei, supported by Baden-Württemberg International, the Architecture and Building Research Institute, Ministry of the Interior as well as the Construction and Planning Agency, Ministry of the Interior. Taiwanese companies of all industries are invited to join and learn about energy efficiency in buildings.

### **2. Individual Meetings between Taiwanese Companies/Organizations and German Companies**

**Dates:** November 21st – 23rd, 2018

**Location:** Taiwan

By individually visiting local Taiwanese companies and organizations for three days, German companies offer B2B meetings that give both sides a chance to have a detailed exchange on energy efficiency related projects as well as possible future cooperation.

# 德國參訪團成員介紹

(按英文字母排序)

# German Delegation Members' Profiles

(In alphabetical order)



## **Reinhard Binder** **Sales Manager Architecture**

建築行銷經理

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## **Christian Geiger** **Commercial Director**

商務總監

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### 公司簡介

#### Binder Parametric Metal GmbH — 3D客製金屬

位於德國Karlskron之Binder Parametric Metal GmbH專精於實現獨立3D立面與三維形狀板材室內設計。量身定制的參數化解決方案為立面表面提供了新的建築特色。鈹金成型技術的獨特工程知識與專門技術知識為建築物創造了獨特的解決方案。

#### 戶外解決方案

3D金屬面板能提供永續性與舒適性。金屬外立面為一完整耐用之外殼，可以防止損壞與天氣之影響，藉由面板絕緣厚度與防曬功能，可以實現建築節能之目標。

#### 內部解決方案

3D塑形內牆覆層不僅加強視覺效果，更提供隔熱功能，有助於防火，並根據使用類型，提供不同手法重新設計空間。

#### 產品多樣性

Binder Parametric Metal生產各種形狀、飾面與顏色的3D金屬面板，並提供完整的新設計。產品由鋁、不銹鋼、銅、黃銅與許多其他金屬及合金製成。您可以選擇不同的表面處理，如消光、拋光、刷塗、陽極氧化或粉末塗層。

## Binder Parametric Metal GmbH

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Germany / 德國  
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www.binderpm.de



### COMPANY PROFILE

#### **Binder Parametric Metal - 3D Customization**

The company Binder Parametric Metal GmbH based in Karlskron specializes in the realization of individual 3D facades and in the interior design of three-dimensionally shaped sheets. Tailored, parametric solutions give facade surfaces new architectural features. Distinctive engineering knowledge and specific technological know-how in sheet metal forming technology create unique solutions for buildings.

#### **Outdoor solutions**

The 3D metal panels provide sustainability and comfort. As a complete and durable cover, metal facades protect against damages as well as the effects of weather. The realization of almost every insulation thickness as thermal insulation and use as sun protection account for energy efficiency of the building.

#### **Interior solutions**

3D-shaped interior wall cladding offer not only visual enhancement, but also insulating benefits. They contribute to fire protection and, depending on the type of use, offer different ways of completely redesigning rooms.

#### **Product diversity**

Binder Parametric Metal produces 3D metal panels in a variety of shapes, finishes and colors and offers a complete new design. The products are manufactured in aluminium, stainless steel, copper, brass and many other metals and alloys. You can choose from different surface treatments such as matting, polishing, brushing, anodizing or powder coating.

The Taiwan market is in particular interesting for Binder Parametric Metal, as there is a high demand for new construction and modernization - especially in order to implement energy efficiency aspects through innovative facade solutions.



## **Wolfgang Schmidt** **Business Manager Northern & Eastern Europe**

北歐與東歐業務經理  
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### 公司簡介

Kaimann GmbH為國際知名可伸縮彈性絕緣產品創新供應商，亦能因應各式應用需求客製化解決方案，目前已於全球50多個國家設有代表處。Kaiflex絕緣材料具高效率、絕緣佳、低噪音、耐腐蝕等高安全防火特性，並被廣泛應用於民生、工業製造、食品工業、化學品與製藥、重工業以及石油天然氣部門。

Kaimann總部與生產基地皆位於德國北萊茵-威斯特伐倫邦的赫費爾霍夫，由內部自行研發之高科技進階生產設備以及持續優化生產製程，確立了Kaimann全球高品質絕緣解決方案的領導地位。

憑藉顆粒技術及對生產過程的縝密監控，Kaimann能維持其產品之精確高優質特性。其創新包裝、卓越物流理念（擁有超過20,000個托盤槽的全自動物流中心）皆確保Kaimann能迅速滿足全球客戶之需求，並提供服務。

## Kaimann GmbH

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Tel. / 電話: +49 5257 9850 0  
[www.kaimann.de](http://www.kaimann.de)



### COMPANY PROFILE

Kaimann GmbH is an internationally established manufacturer in the field of elastomeric insulation products. Known for its innovations and highly advanced technologies, the company offers a broad portfolio for a wide range of applications. Thanks to its comprehensive distribution network, Kaimann is represented in over 50 countries. Kaiflex insulation products provide a high level of thermal efficiency as well as safe and effective fire, noise and corrosion protection. They are used in domestic applications, industrial manufacturing, the foodstuffs industry, chemicals and pharmaceuticals, heavy industry and the oil and gas sector.

Kaimann's production facilities are located at its headquarters in Hövelhof, eastern Westphalia. This technologically advanced production facility – which has been developed in-house - as well as ongoing production processes optimization form the basis of the worldwide, high-quality insulation solutions and services.

The use of granulate technology and meticulous monitoring of production processes mean Kaimann GmbH can produce high-quality products to precise dimensions. Thanks to its innovative packaging and logistics concept and its fully automated logistics centre with over 20,000 pallet slots, Kaimann is able to supply its customers around the world quickly and flexibly.



**Li Deng**  
**Market Development Manager**

市場拓展經理

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## 公司簡介

可耐福集團為世界領先建築系統與綠建材製造商，可耐福絕緣為其集團重要分支，亦為全球絕緣材料產業中最先進的品牌之一。業務範圍涵蓋歐洲（包含英國與俄羅斯）、亞洲（馬來西亞新工廠將於2020年正式營運）以及北美洲，年營收突破17億歐元。

可耐福絕緣活躍於美國、加拿大、英國、北歐、西歐、中歐、東歐、俄羅斯與獨立國家國協以及亞太地區。亞太區域總部設於澳洲布里斯本，致力提供日本、韓國、中國、新加坡、澳洲及紐西蘭等地客戶協助。近年來，可耐福的發展策略轉向經濟迅速發展的亞太地區，原因在於其現有建築隔熱效果與建築節能效率皆相對較低、既有輕質骨材建築結構的高普及率、玻璃棉之高市佔率，以及逐年上升之防火建材成本。

可耐福為全球領先絕緣產品製造商，提供各式適合新舊住宅、商業建築與工業應用之高能源效率及具備聲學吸音性能之絕緣產品。產品包含具ECOSE獨家專利技術之玻璃棉（在日本以Earthwool及EcoBatt品牌產品線下銷售）、岩石礦棉與木棉（在Heraklith品牌產品線下銷售）。可耐福絕緣在創新、研究及開發領域皆擁有輝煌成果，完美展示可耐福絕緣產品之競爭優勢。

## Knauf Insulation GmbH

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### COMPANY PROFILE

As part of the Knauf Group, Knauf Insulation represents one of the most respected and progressive names in insulation worldwide. With manufacturing operations in Europe, (including Russia and UK) Asia (New manufacturing plant in Malaysia in 2020) and North America, annual sales revenue is well in excess of EUR 1.7 billion.

Knauf insulation is divided into 7 regions: the USA & Canada /UK& Nordic / Western Europe /Central Europe / Eastern Europe /Russia & CIS countries / Asia Pacific. The Asia Pacific region has its headquarters in Brisbane and services Japan, Australia, New Zealand, Korea Singapore and China. Knauf Insulation views this region as a “growth area” for our business due to 1) comparatively low levels of insulation in existing buildings, 2) comparatively low levels of energy efficiency for new buildings, 3) an existing acceptance of light weight construction, 4) an existing high market share of glasswool,5) increasing consumer value of fire resistance building materials.

The company is the fastest growing insulation manufacturer in the world with a wide range of insulation products to meet the growing demand for energy efficiency and acoustic performance in new and existing homes, commercial buildings and industrial applications.

Products include glass mineral wool with the patented ECOSE Technology (marketed in Japan as Earthwool and EcoBatt), rock mineral wool, and wood wool (marketed under Heraklith brand). Knauf Insulation has a successful track record in innovation, research and development contributing to the development of proprietary technology to create significant advantages over competitive manufacturers.



**Jens Lüder Herms**  
**Export Manager and Applications**  
**Engineer**

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**Ren-Jeng Wei**  
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## 公司簡介

MOLL bauökologische Produkte GmbH旗下品牌pro clima®為建築結構智慧密封系統之市場領導者。pro clima®研發並提供完整專業系統，致力提供防止建築、黴菌損害之解決方案。pro clima®提供全面專業系統，完美調配各獨立零組件：

- 用於內部密封，濕度可變、高性能之 hydrosafe 蒸氣緩凝劑與氣密膜
- 能積極輸送水分之屋頂襯裡與壁襯膜可永久可靠防護屋頂與牆面之外部密封膜
- 特殊黏著劑與防水膠帶（經獨立測試確認黏著劑具百年效力）
- 用於建築之系統產品，經有害物質測試後，皆符合健康生活環境之最高標準要求

pro clima®專業系統採用德國與歐洲頂尖生產設備之最新生產製造流程。該系統案最高品質標準生產，可提供有效隔熱效果，而不對木材與鋼結構造成結構性損害。

- 絕佳隔熱效果
- 優異氣密性，降低供暖成本
- 最佳防止結構與黴菌損害之材料
- 健康的室內氣候
- 減少二氧化碳排放量
- 最佳生態價值

## Moll bauökologische Produkte GmbH

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<http://www.proclima.de>



### COMPANY PROFILE

MOLL bauökologische Produkte GmbH with its trade mark pro clima is the pioneer in the intelligent sealing of the building envelope. pro clima® develops and provides complete professional systems for maximum protection from mould and structural damage. pro clima® offers a comprehensive professional system with perfectly coordinated individual components:

- Humidity-variable, high-performance hydrosafe vapour retarder and airtight membranes for interior sealing
- Roof-lining and wall-lining membranes with active moisture transport for permanent, reliable exterior sealing of roofs and walls
- Special adhesives and waterproof adhesive tapes (Adhesion for 100 years, independently tested and confirmed)
- Seal grommets as detail solutions
- System products for construction that have been tested for harmful substances and that fulfil the highest standards for healthy living environments

### Highest quality for perfect functionality

The pro clima® professional system is manufactured using the latest production processes in leading production facilities in Germany and Europe. Produced according to the highest quality standards, this system delivers effective insulation without structural damage on timber and steel structures.

- Highest effectiveness for thermal insulation
- Reduction of heating costs thanks to optimal airtightness
- Dry insulation materials
- Best possible protection against structural damage and mould
- Comfortable indoor environments in summer and winter
- Healthy room climate
- Reduction of CO<sub>2</sub> emissions
- Highest ecological value

# 德國官方代表簡介

(按英文字母排序)

# Official German Representatives' Profiles

(In alphabetical order)



**Dr.-Ing. Olaf Boettcher**  
**Head of Division “Energy-Optimized Building”**

德國聯邦能源主任委員

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Urban Affairs and  
Spatial Development

within the Federal Office for  
Building and Regional Planning



**Federal Institute for Research  
on Building, Urban Affairs and  
Spatial Development**

德國聯邦建築、都市暨空間發展  
研究院

## PROFILE

The Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) within the Federal Office for Building and Regional Planning (BBR) is a departmental research institution under the portfolio of the Federal Ministry of the Interior, Building and Community (BMI). It advises the Federal Government with sectoral scientific consultation in the political fields of spatial planning, urban development, housing and building. The BBSR was founded in 2009. In sum, approximately 160 people are working at the two locations of the BBSR in Bonn and Berlin.

## 簡介

德國聯邦建築、都市暨空間發展研究院隸屬德國聯邦建築及區域規劃局，為德國聯邦內政、建設暨家園部之研究單位，提供聯邦政府在空間規劃、城市發展、居住與建築等領域中科學性政策建議。

德國聯邦建築、都市暨空間發展研究院成立於2009年，在柏林與波昂共計160名工作人員。



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**BVES**  
BUNDESVERBAND  
ENERGIESPEICHER

**German Energy Storage  
Association**

德國儲能協會

## PROFILE

The Bundesverband Energiespeicher (BVES) [German Energy Storage Association] represents the interests of companies from the most diverse sectors, which have the common goal of development and marketing as well as the operation of energy storage in the areas of electricity, heat and mobility.

The objective is to unite and promote all industry players under one banner. Members of the association include companies from all sectors related to energy storage, such as technology manufacturers, project developers, system integrators, consulting firms, research institutions and other market leaders in the cleantech sector.

## 簡介

德國儲能協會（Bundesverband Energiespeicher, BVES）代表來自多元產業中，在電力、熱力與運輸移動領域中，具開發、行銷與儲能營運共識之企業。協會成立旨在團結並促進所有領域中之企業共同致力於能源儲存事業。會員包括各行業中具儲能相關部門之企業，如科技製造商、專案開發商、系統整合商、顧問公司、研究機構與其他清潔科技業界之領導者。

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