





## About bw engineers

### bw engineers

represents a consortium of engineering excellence, which integrates and coordinates the foreign market activities of leading consulting companies under a joint management.

### bw engineers

member companies employ over 800 planners and engineers in the areas of

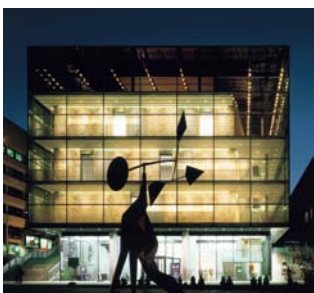
- Project Management
- Surveying and Geo Informatic
- Geotechnical Engineering
- Regional & Urban Planning - Transportation & Traffic
- Water and Environment
- HVAC / MEP
- Structural Engineering
- Architectural Design

### bw engineers

are perfectly capable of conducting complex projects such as general planning programs as well as highly specialized studies and simulations. Senior representatives of bw engineers have longtime experience in both consulting and teaching.

### bw engineers

provide technical coverage, interdisciplinary cooperation, profound know-how, and longstanding international experience, tailored to address projects of every nature and scale.



[2]



[3]



[4]



[5]



[1]

### bw engineers

has been set up with the active support of the State Government of Baden-Wuerttemberg and represents the largest, most capable consortium of consulting engineers in Germany. The bw engineers member companies are chartered engineering companies of the Chamber of Consulting Engineers of the State of Baden-Wuerttemberg.

### bw engineers

is your primary point of contact in Germany for entering into communication with well-known consulting companies in the State of Baden-Wuerttemberg. With our passionate pursuit of excellence we provide advice and consultation on specialised engineering or design.

### bw engineers – mission

We breathe engineering and design. We stand for innovative interdisciplinary performance. A thorough quality management process allows us to transfer the German engineering standards to our projects abroad.

Interdisciplinary planning and our dedication to achieve the best quality for our customers will guarantee that 'Engineering Made in Germany' can be provided to our clients worldwide. Our excellence is achieved through an open interdisciplinary exchange by continually questioning, communicating and interrelating, to come up with innovative answers.



[6]



[7]



[8]



[9]





[10]



[11]

## Project Management

The successful completion of any project is mainly based on efficient project management. We develop customized project strategies which guarantee that the project will be handed-over on time. Our professional project preparation and implementation strategy enable us to attain the project objectives. Careful cost management and ongoing control during contract awarding ensure that the project remains within budget.

We develop clearly defined user requirements and specifications to ensure protection against unjustified demands and supplementary claims. A well-structured risk management approach minimizes the overall risk exposure and generates further opportunities to improve project performance. The benefits of our services are guaranteed overall cost, realistic schedules, optimized processes and mitigated risks throughout the whole project life-cycle.

We deliver the following services

- project organization, project leads
- construction management
- cost management
- schedule management
- quality management
- quality management
- risk management
- technical and economic controlling
- value management
- contract and claim management
- planning deliverables coordination
- building site logistics

## Surveying and Geo Informatic

Wherever proximity or neighborhood are to be altered, improved or preserved, wherever for this purpose is being planned, built and administered, current and reliable information on topography and inventory of the real world is required in professional form and to precise scale.

Precise reference frames need to be established, points and axes staked out and newly built objects be surveyed. Cutting edge survey concepts have to be applied to the individual needs and conditions of each project. They have to be implemented, realized and controlled. Sometimes even specific survey systems are to be designed and realized in order to support the project optimally.

bw engineers' surveyors are optimally educated and equipped for these duties, with the newest instruments, spacial sense and longtime experience.

surveying

- surveying for design, construction and documentation
- geometric consultancy
- setup and maintenance of reference frames

geo informatic

- 3D laserscanning and 3D modelling
- automatic measuring systems
- setup and maintenance of geo information systems
- geomonitoring systems



[18]



[19]



[20]



[21]



[12]

## Geotechnical Engineering

Due to the high demand of transportation and construction projects, innovative geotechnical solutions are needed. The knowledge of soil and groundwater behaviour, the application of modern calculation methods and the ability to find geotechnical solutions in an economical and technical manner leads to optimal performance and satisfied customers.

### geotechnical services

- site investigations and laboratory services
- geo-technical reports
- compaction control

### geotechnical engineering

- foundation design
- piling (bored, screwed, driven CFA piles)
- slope stabilisation (soil nails, rock fall netting, rock catch fencing, shotcreting)
- ground anchors (permanent and temporary anchors)

### geotechnical calculations

- displacement of (deep and raft) foundations
- FEM calculations of displacement of site walls
- slope stability calculations



[22]



[23]



[13]

## Regional and Urban Planning

Regional planning and urban design are closely related disciplines. They deal with the development and improvement of physical, economical and social conditions of a region, city or neighbourhood in the interest of public health, welfare and safety.

We provide regional planning, land use planning and urban design services. We offer the aesthetic and strategic practice of giving a good shape to urban areas and public spaces, focused on sustainable development.

## Transportation and Traffic

The guarantee of future mobility of persons and goods is an essential precondition for the sustainable, economical and social development of regions and cities. This concerns both, the development of transport networks and introduction of innovative efficient transport systems, as well as an effective, safe and situation-adapted control and management of all traffic modes.

We are familiar with mobility demands and traffic conditions in fast-growing big cities and metropolitan regions, as well as in highly motorized conurbation areas.

- regional and urban transport planning,
- traffic infrastructure design and engineering,
- traffic control and management/ITS.



[24]



[25]





[14]



[15]

## Water and Environment

We provide, on all scales, the comprehensive planning and technical assistance services required for projects in the spheres of water supply, wastewater disposal and environmental planning.

Beside engineering services in the sectors of water and the ecological environment our expertise includes inventories and baseline investigations as well as training and upgrading.

### water supply

- hydrogeology
- integrated water resources management
- water management master plans
- water pumping stations
- water works and water treatment plants
- water transmission and supply networks

### wastewater disposal

- drainage and sewerage master plans
- wastewater pumping stations
- construction and rehabilitation of sewer systems
- storm water treatment plants
- wastewater treatment plants
- sludge treatment plants
- sludge disposal concepts

### environmental planning

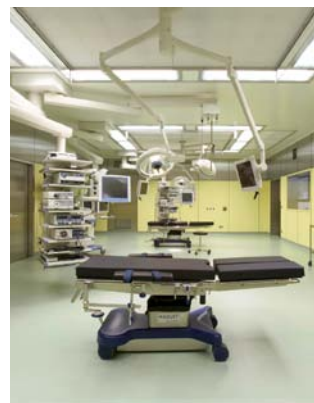
- solid waste management master plans
- waste collection, treatment and disposal
- environmental impact assessment
- geo-thermal aspects



[26]



[27]



[28]



[29]

## HVAC/MEP

We offer individually designed state-of-the-art systems for technical building services.

Both ecological and economical high performance solutions are the basis of our design work to achieve sustainable and reliable energy systems.

### sustainable concepts

- solar cooling
- power-heat coupling
- geothermal cooling
- municipal district cooling systems
- systems design and integration
- strategic energy management and optimization

### specialized services

- security systems design
- building automation
- high availability datacenters - green datacenters
- laboratory facilities
- hospitals and medical equipment
- clean room facilities
- airport buildings
- logistics facilities

### management and consulting services

- consulting and training of planning teams in complex building projects
- quality monitoring



[16]



[17]

## Structural Engineering

Architectural and structural engineering require creative planning and scientific understanding. Structural engineering represents a combination of high-technology standards and aesthetic quality.

The planning of load bearing structures is an essential part of any construction project's planning phase. We are capable of giving physical form to both the requirements of developers and to architectural concepts. The force of innovation is expressed through our use of the most modern materials and scientific methods.

Special construction methods such as light weight construction and composite structures are an important part of our scope of work. Structural integrity, practical usability, cost-efficiency, permanence and sustainability, all play an important role in our planning work.

Licensed Quality assurance and Checking engineers guarantee independent technical review and integrity of structures.

- buildings, high-rise buildings
- sport and industrial facilities
- plant and design engineering
- bridge construction and wide span structures
- structural concrete, steel structures and composite structures
- facade structures and load bearing glass structures
- licensed checking engineers

## Architectural Design

We provide a responsive and professional service in architectural design. Fitted to the requirements of each client we deliver high quality results regardless of project size or type. Our mission is to develop architecture which addresses its physical and cultural context and allows effective solutions for procurement and construction.

Our work includes all types of planning and design. Starting from conceptual design we provide full architectural services for building projects from inception to completion.

Complex building types, e.g. hospitals and laboratories, are our speciality. We have a long standing experience in developing masterplans for cities, universities or healthcare facilities of the future.

Our integrated approach to architecture, landscape, sustainability and interior design enables a sensitive response to the diverse needs and moods of users across a range of building environments.

Sustainability is an essential element of our design approach.

In each project, regardless of type, use or scale we aim to:

- minimise energy use, pollution, waste and water use
- develop multi-use building elements which gain additional energy
- use low environmental impact materials, from renewable sources where possible
- create durable and adaptable design solutions and measure the effectiveness of our designs



[30]



[31]



[32]



[33]

## Credits:

### Project name:

[1] DOC Dockland, Hamburg

[2] Museum of Art, Stuttgart  
[3] New Trade Fair Centre, Stuttgart  
[4]  
[5] B 10-Tunnel Pragsattel, Stuttgart  
[6] Kläranlage Bändlegrund, Weil am Rhein  
[7] University Hospital, Marburg  
[8] Bridge A81 Monrepos  
[9] University Hospital, Freiburg  
[10] Mercedes Benz Museum  
[11] New Trade Fair Centre, Stuttgart  
[12]  
[13] Mercedes Benz Museum, Stuttgart

[14] Kläranlage Strudelbach, Vaihingen/Enz  
[15] Philipps University, Marburg  
[16] ARCUS Clinics, Pforzheim  
[17] University Hospital, Marburg  
[18] Masterplan Klinikum Stuttgart  
[19] Landesbank Baden-Württemberg, Stuttgart  
[20] HSL-Zuid, The Netherlands  
[21] New Trade Fair Centre, Stuttgart  
[22]  
[23] Kanalvortrieb Herdweg, Klinikum Stuttgart  
[24] Fahrgastinformationssystem Gütersloh  
[25] Verkehrssimulation Messekreisel Köln  
[26] Kläranlage Emschermündung  
[27] Deponie Burghof  
[28] ARCUS Clinics, Pforzheim  
[29] Festo AG & Co. KG, worlds largest solar cooling facility  
[30] Exhibition Building and Adventure World - Centre for Customers, Rastatt  
[31] Belebungsbecken - Hauptklärwerk Stuttgart-Mühlhausen  
[32] ARCUS Clinics, Pforzheim  
[33] ZMB central medical library of Philipps University, Marburg

### bwe member:

Drees & Sommer Group

Drees & Sommer Group  
intermetric GmbH  
Baden-Wuerttemberg Chamber of Engineers, Stuttgart  
KARAJAN • Ingenieure Ingenieurgesellschaft mbH  
Weber-Ingenieure GmbH  
AEPmed - Healthcare Planning  
IBK Prof. Kirsch Ingenieurgesellschaft  
AEPmed - Healthcare Planning  
Drees & Sommer Group  
intermetric GmbH  
Baden-Wuerttemberg Chamber of Engineers, Stuttgart  
KARAJAN • Ingenieure Ingenieurgesellschaft mbH

bit consult GmbH  
AEPmed - Healthcare Planning  
AEPmed - Healthcare Planning  
AEPmed - Healthcare Planning  
AEPmed - Healthcare Planning  
Drees & Sommer Group  
intermetric GmbH  
intermetric GmbH  
Baden-Wuerttemberg Chamber of Engineers, Stuttgart  
KARAJAN • Ingenieure Ingenieurgesellschaft mbH  
Dr. Brenner Ingenieurgesellschaft mbH  
Dr. Brenner Ingenieurgesellschaft mbH  
Weber-Ingenieure GmbH  
bit consult GmbH  
AEPmed - Healthcare Planning  
THURM&DINGES Planungsgesellschaft mbH  
IBK Prof. Kirsch Ingenieurgesellschaft

Weber-Ingenieure GmbH  
AEPmed - Healthcare Planning  
AEPmed - Healthcare Planning

### Additional credits:

Architecture: BRT Architekten Hamburg, Visualization: Datenland Erik Recke, Hamburg, Client/Photo: Robert Vogel GmbH & Co. KG, Hamburg  
Photo: Brigida Gonzales, Stuttgart  
Photo: intermetric GmbH  
Photo: IngKBW  
Photo: Tiefbauamt Stuttgart  
Photo: Weber-Ingenieure GmbH  
Photo: Jochen Stüber  
Photo: Andreas Keller  
Architecture: AEP Eggert+Partner  
Photo: Daimler Chrysler AG  
Photo: intermetric GmbH  
Photo: IngKBW  
Design and Implementaion Plan: KARAJAN • Ingenieure Ingenieur gesellschaft mbH  
Klinger und Partner GmbH, Photo: Horst Klinger  
Architecture: AEP Eggert+Partner, Photo: Jochen Stüber, Hamburg  
Architecture: AEP Eggert+Partner, Photo: Jochen Stüber, Hamburg  
Architecture: AEP Eggert+Partner  
Visualization: AEP Eggert + Partner, Stuttgart  
Photo: Hans-Georg Esch, Hennef  
Photo: intermetric GmbH  
Photo: intermetric GmbH  
Photo: IngKBW  
Photo: KARAJAN • Ingenieure Ingenieurgesellschaft mbH  
Photo: Dr. Brenner Ingenieurgesellschaft mbH  
Photo: Dr. Brenner Ingenieurgesellschaft mbH  
Photo: Weber-Ingenieure GmbH, Pforzheim  
Photo: Klinger und Partner GmbH  
Architecture: AEP Eggert+Partner, Photo: Jochen Stüber, Hamburg  
Photo: THURM&DINGES Planungsgesellschaft mbH  
Architecture: Kurz und Partner Urbach

Photo: Josef Winter, Weber-Ingenieure GmbH, Pforzheim  
Architecture: AEP Eggert+Partner, Photo: Jochen Stüber, Hamburg  
Architecture: AEP Eggert+Partner

© Brochure: PERIMETRIK.de



Obere Waldplätze 13  
70569 Stuttgart  
Germany

Tel: +49 711 93150484  
Fax: +49 711 93150485

info@bw-engineers.com  
www.bw-engineers.com