



# Company Presentation

**Products**

**Industrial Plants**

**Automation**

**Energy Systems**

**Photovoltaics**

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## International Partners



Switzerland



Austria



Denmark



Netherlands



Spain



Poland



United Kingdom



Turkey



Russia



Australia



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„Ahead  
of Progress“

# Enterprise

## IGATEC Profile

IGATEC is an internationally operating engineering company. Since **1983** we have been offering an extensive portfolio in the field of automation and construction of industrial plants to our customers.

Among electro technical engineering, our business spectrum is amended by loading and renewable energies technology. Internationally **IGATEC GmbH** is considered to be one of the leading full-range providers in plant engineering and construction.

At our locations in Speyer and Hagen we currently employ approx. **75 people** representing the most important resources of our company, because qualified and highly-motivated personnel is the basis for content customers. Reliability creates confidence and turns us into a professional partner of the pharmacy as well as of the chemical and petrochemical industry.

The logo consists of the letters 'IGA' in a bold, sans-serif font, followed by a horizontal line, and then 'TEC' in a similar bold font below the line.The logo is identical to the one on the left, but with the word 'International' in a smaller, blue font positioned above the 'TEC' part.

**Industrial Plants**

**Automation**

**Energy Systems**

**Photovoltaics**

**Products**





## Admittances and Certifications

- Certified enterprise in accordance with DIN EN ISO 9001:2008
- Certified enterprise in accordance with SCC\*\* (Safety Certificate Contractors)
- Specialized enterprise in accordance with WHG § 19 I (German Federal Water Act)
- Registered and authorized enterprise in the holding organization of DVGW (German Association for Gas and Water)
- Registered enterprise for NATO infrastructure measures
- Certified enterprise in accordance with VdS (Institution for Fire Protection and Security)
- Certified enterprise in accordance with TA-Luft (Technical Instructions on Air Quality Control)

## Our Values

A crucial ingredient of our success is the corporate philosophy by which our company has been focusing on long-term partnerships for years.

Particularly in Russian-speaking territories we have got co-partners coaching and serving our customers and projects.

Among our focus on long-term partnership we concentrate our reflection on the following main values:



„We Take Up Any  
Challenge“

# Products

## Swivel Joints

Designing and manufacturing swivel joints for nearly every thinkable application is the core competence of **IGATEC International GmbH**, our subsidiary in Hagen.

**IGATEC Swivel Joints** are flexible piping components realizing multidimensional movements of pipework. They are used in applications, where

- flexible piping systems have to transfer liquid or gaseous fluids
- liquid or gaseous fluids have to be injected from fixed into rotating components of equipment
- connecting hoses have to be balanced from stress caused by bending or torsion forces or have to be replaced completely by swivel joint scissors.



We manufacture standard swivel joints as well as customized swivel joints for almost all fluids, pressure ranges from vacuum to > 14.500psi (1.000bar) and temperature ranges from -328°F to +1.112°F (-200°C to +600°C).

**IGATEC Swivel Joints** are available in 8 styles and with 3 types of connecting ends (threaded, flanged and welding ends) which can be combined with each other according to usage.

## Rotary Joints

We design and manufacture rotary joints in different nominal diameters and from various materials, tailored to our customers specifications.

**IGATEC Rotary Joints** are used wherever miscellaneous liquid and / or gaseous fluids have to be fed into a rotating part of equipment, simultaneously or time-delayed.



## Flexible Piping / Swivel Joint Scissors

**Swivel joint scissors** are the major alternative to hose connections when they have to face high stress by torsion and bending forces. Swivel joint scissors are designed and manufactured according to customers' demands e.g. by selecting the appropriate **IGATEC Swivel Joints**.



## Folding Stairs / Loading Platforms

At loading processes of liquid or gaseous fluids safety of the personnel is the number one priority. For this purpose we manufacture folding stairs (with or without protective cage) and entire loading platforms.



## Storage Tank Systems

**IGATEC Storage Tank Systems** serve as defined transport of liquids into storage tanks. Our portfolio comprises **floating suction systems**, **floating roof drainages** and **skimmers**.



## Loading Systems

We design and manufacture loading systems for loading and unloading liquid or gaseous fluids into rail tank cars, road tanker and ships. Along with the realization of individual loading arms and serial loading systems for loading from above (top loading) or loading from below (bottom loading) we also realize clocked loading systems. These spot systems can load up a group of coupled rail cars with only a few loading arms.

Our loading arms can be operated manually or automatically, e.g. with our electrically powered **patented TOP SPOT®** loading system.



## Breakaway Couplings / Emergency Release Couplings

Breakaway couplings and emergency release couplings ensure the safe transfer of liquid and gaseous fluids by cutting the fluid transfer loss-free at a defined applied force. Our **ERC- and BAC couplings** are also suitable for operating temperatures to  $-320^{\circ}\text{F}$  ( $-196^{\circ}\text{C}$ ).





„We Realize Loading Processes at the Highest Stage“

# Industrial Plants

## Having a Lock on Liquids...

As a prime contractor we design, project and modernize turn-key facilities with focus on chemical, petrochemical and pharmaceutical industries.

Besides **loading stations** and **tank storages** for liquid and gaseous fluids, such as

- Light petrochemicals (petrol, diesel, kerosene...)
- Dark petrochemicals (crude oil, bitumen...)
- Stable gas condensates
- Liquid gases (LPG, chlorine...)
- Biodiesel / bioethanol
- Nearly all other chemical products

...our portfolio includes **drying plants, reactors, rectifications, centrifuges, refinery facilities** and a wide range of **peripheral technologies**.



## Our Services at a Glance - We Offer One-Stop Solutions

- **Conception**
- **Engineering**
- **Project management**
- **Procurement, manufacturing and delivery of components**
- **Setup / assembling**
- **Commissioning**
- **In-service training**
- **After-sales service**

## Loading Facilities

Our loading facilities allow the defined loading of liquid fluids into

- Rail tank cars
- Tanktainer
- Road tanker
- Ships

using the latest generation of fully automated loading arms.



In addition to our fully automated **New On Spot** and **patented TOP SPOT®** loading systems we implement loading facilities with standard loading systems, such as

- **Top loading systems**
- **Bottom loading- / bottom unloading systems**
- **Hydraulic On Spot loading systems or**
- **Loading skids**



## Peripheral Systems

Integrated planning of industrial plants also includes the development of the peripheral technologies needed, from **pipng systems** via **pump stations** and **VRUs (vapor recovery units)** to various **security systems**.



## Processing Plants

Our range of services includes processing plants, such as

- **Crude oil processing plants**
- **Sewage sludge incineration- and drying plants**
- **Blending plants and additive systems**



## Tank Storages

We engineer, automate and assemble peripheral technologies inside tank storages for liquid products of relevant industries.

Fully Automated

**New On Spot Loading System**

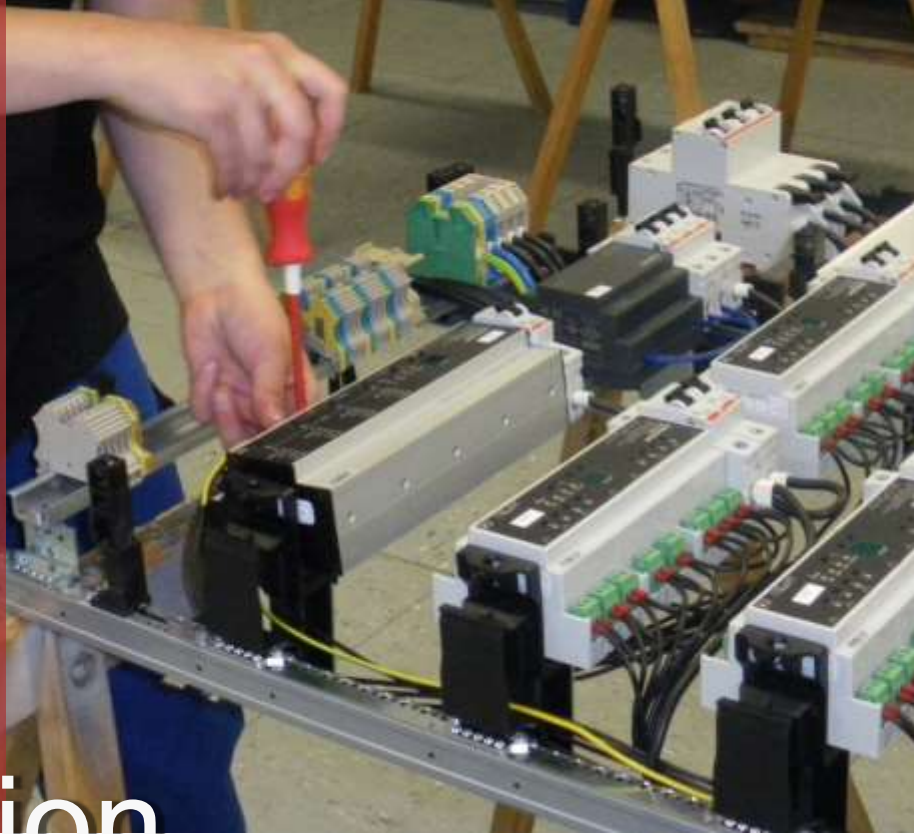


Patented

**TOP SPOT® Loading System**



„Automation is  
Reference Value for  
a Successful  
Production“



# Automation

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## Advancement by Technology

Automation technology allows the individual control of automated technical, mechanical and chemical processes. We design, program and visualize centralized and decentralized process control systems. The integration of such systems is carried out by our on-site specialists.

## Engineering

From concept to implementation planning, from **basic-planning** to **detail-engineering**: at each phase of the engineering process we develop economic, reliable and future-proof plant- and automation concepts in close collaboration with our customers.

## E-MCR

**MCR-technology** is the basis for our successful operation of complex process-engineered plants. We can draw on a considerable potential of experience concerning the most varied categories of MCR-technology. We operate internationally just as successful as in Germany.

## Switchboard Construction

Based on more than 25 years of experience we are among the leading manufacturers of switchboards covering the overall scope of the production process. IGATEC-Switchboards are manufactured in our in-house workshop using high-grade components. We realize standard solutions as well as special constructions.



## Programming

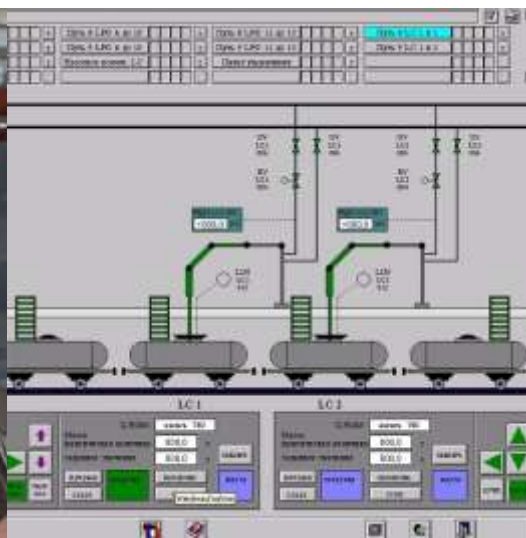
Within the scope of automation projects we offer appropriate programming services for all processes to be automated. Our portfolio includes **visualization systems**, **automation systems**, **process control systems** and **field bus systems**.

## Service / Mounting

Installation and wiring of electrical, measuring and regulating facilities is one of the core competences of IGATEC GmbH.

Our services include:

- Cable trays
- Low-voltage wiring
- MCR-instrumentation
- Field bus and networking cabling
- Installations in potentially explosive atmospheres
- Electrical trace heating
- Commissioning
- Construction management and installation surveillance
- Technical service and maintenance
- On-call service
- BGV A3 testing (electrical equipment tests according to operating safety regulation)



„Future is  
Multidimensional“

# Energy Systems

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## Energy for Future

Limited resources of fossil and nuclear fuels can only be a transitional solution for energy supply. We realize innovative energy systems generating electricity from existing heat or steam sources. As a result existing energy resources are preserved.

## PowerUnit

**IGATEC PowerUnit** uses low pressure steam to generate electricity and optimizes energy efficiency of plants.

Areas of application are:

- Power stations
- Combined heat and power plants (CHP)
- Biomass CHP
- Breweries
- Dairies
- Chemical / pharmaceutical industry
- Building materials industry
- Food industry

## Our Scope of Services

in the area of **PowerUnit** and **ORC-systems** includes:

- **Conception, planning and design**
- **Production / supervising installation**
- **Commissioning**
- **Technical / economic consulting**
- **Authority engineering**
- **After-sales service**



## ORC-Systems

**IGATEC ORC-Systems (Organic-Rankine-Cycle)** generate electricity by using waste heat at low temperature levels (158°F (70°C) up to 572°F (300°C)).

Typical areas of application for **ORC-systems** are:



**Industry**



**Bioenergy**



**Geothermal energy**



**Solar thermal energy**

We design, realize and run ORC-systems. Furthermore we represent ORMAT Industries Ltd., the world leader for geothermal power plants with electrical performance range from 1 MW<sub>el</sub> up to 100 MW<sub>el</sub>.

## Geothermal Plants

We plan and realize geothermal plants to generate electricity and district heat from energy stored in the earth's crust.

Our primary focus is on deep geothermal energy, where geothermal heat is extracted in 3.000 to 4.000 m. By using various methods, like the hydrothermal process, we are able to use this geothermal energy in an optimal way.



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© ORMAT Industries Ltd.



## Our Scope of Services

in the area of **geothermic** includes:

- **Geological research**
- **Authority engineering**
- **Engineering accompanied by process of drilling**
- **Development of storages**
- **Plant design and plant implementation**
- **Assembly and commissioning**
- **Plant operation**

„Solar Power is the  
Future Energy Source “

# Photovoltaics

## Energy From the Sun...

Each day the sun provides **3.000-times** more energy than the world's overall energy needs. In addition to our energy systems we therefore focus on the use of solar energy. We design, install and operate photovoltaic facilities, beginning with small **roof systems** up to large **ground-mounted systems**.

We use modules of leading brand manufacturers. According to our customers' requests we install

- Monocrystalline modules
- Polycrystalline modules or
- Thin-film modules.

Furthermore we realize various mounting systems depending on the roof design, e.g.

- Roof-integrated systems
- On-roof systems
- Elevated systems.





**Independent**  
**Ecology-Minded**  
**Future-Oriented**  
**Profitable**

## Our Services

- **Consulting**  
We advise concerning the technical and economic opportunities
- **Offer**  
We create free offers
- **Profitability calculation / revenue forecasting**  
Based on individual data we create revenue forecasts
- **Planning and projecting**  
We plan tailor-made photovoltaic solutions considering customer wishes and local conditions
- **Application**  
We take care for application to appropriate grid operators
- **Assembly and commissioning**  
We assemble all components on site and hand over the turn-key system to the customer

## Solar Power Storage Units

A photovoltaic system is most productive when the sun is shining - in the daytime. However, this is not necessarily the time during which electricity is mostly needed. We develop and realize ideal solutions for storing electricity as well as the corresponding management systems for photovoltaic systems.

As a result solar electricity can be used whenever it is needed - at day and at night. Solar energy can be utilized optimally.





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