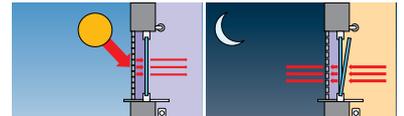




Photo: GEIGER



Energy is a luxury good

The building energy efficiency is a priority issue in the context of climate change.



Automation: a considerable potential for higher energy savings

The sun protection device can optimize its energy efficiency ...



New products

Electric and mechanical operating systems, system components.



Thinking today about tomorrow

Energy efficiency and energy savings are in addition to renewable energy the main pillars of a successful energy policy. In the first edition of "GEIGER Impulse 2014", we therefore want to deal with this important issue, showing how you can achieve significant energy savings with effective sun protection systems.

Sustainability and responsibility for the environment and future generations are essential components of the GEIGER corporate policy.

Here are some of the ways we contribute to sustainability: development and manufacturing of durable motors, special emphasis on the energy advantages of automated sun protection systems as well as efficient, environmentally-friendly energy technology.

Sustainable and responsible management means to us the use of eco-friendly, resource-efficient raw materials and manufacturing methods, waste prevention and consistent recycling in order to ensure a clean and environmentally friendly production.

Environmental responsibility is the task of all of us. Together we must move towards an ecological society. Join us!



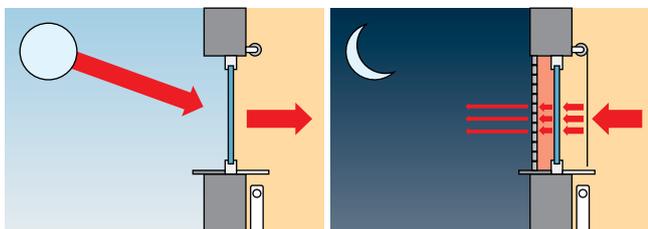
Dr. Marc Natusch

■ Introduction

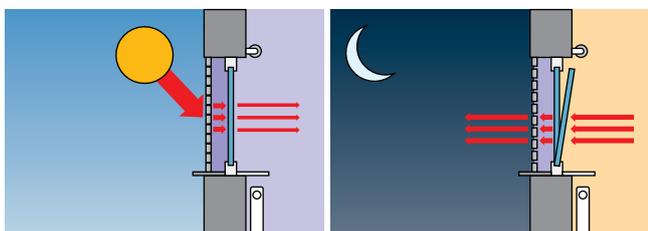
Energy is a luxury good

The building energy efficiency is a priority issue in the context of climate change and rising energy costs.

Optimal thermal insulation and the use of thermal insulation glazing are appropriate means to save energy. A well-planned solar protection reinforces this goal by preventing the cooling of the building in winter and overheating in summer.



Wintertime: during the day, warm up your room naturally with sunlight. At night, the sun protection system provides high thermal insulation.



Summertime: the sun protection system reliably keeps off the heat during the day. At night, allow cool air to circulate.

In winter 40 % of the heat escapes through the windows. The electricity bill can be reduced by 10% if the sun warms the house during the day and if at night an insulating air cushion is formed between the internal and external sun protection elements. In summer, the sun shading system provides effective sun and heat protection during the day and at night the shutter ventilation position provides cooler outside air.

To cope with the energy represented by the artificial lighting in offices, the use of Venetian blinds with daylight function is highly recommended. While the upper third of the blind is open and ensures daylight, the lower part is in the closed position and provides maximum protection.

Modern, airtight universals and thermally insulated rolling shutter boxes exclude any thermal bridges. Motors with optimized technical design and high efficiency help maintain a dynamic balance between ecological and economic values.

■ Automation

Automation: a considerable potential for energy savings

When it comes to sun protection systems, the cranks obviously represent the zero energy solution. They are inexpensive and maintenance-free. However, they are used less frequently than motorized operating systems.

If the shading device is not activated or activated too late, a significant amount of energy can escape through the

window surfaces. We even go one step further: the sun protection device can optimize its energy efficiency if it is not only motorized, but also automated. Indeed only a programmable, intelligent system can react immediately and yet flexibly to changing light and weather conditions – day and night, in summer and in winter and user-independent.

Equipped with timers and sensors that respond to changes in the weather, the installation of automated systems is more expensive, but avoids the air conditioning energy consumption and improves the thermal insulation value of windows.

The energy consumption for heating and cooling of a building – either single-family home or office building – is efficiently reduced.

Energy savings through solar gains in winter and summer heat protection can only be achieved in cooperation between solar protection systems equipped with intelligent controls in connection with the appropriate sensors.



The GEIGER radio program: sun protection automation without major renovations or financial cost.

■ Interview

Three questions to Jürgen Kessing, mayor of Bietigheim-Bissingen:

What is the energy policy of the city of Bietigheim-Bissingen?

The city of Bietigheim-Bissingen has very competent municipal utilities (SWBB). The municipal utility invested in a range of renewables – including photovoltaic, onshore wind, hydro, biogas and other cutting-edge technology, above all in a combined heat and power (CHP) plant and a hydroelectric power plant.

The municipal utility is also responsible for all urban heating systems and ensures that renewable energy and efficient heating are used. Over the last 10 years, CO₂ emissions for heating of municipal buildings have been reduced by more than 50 %.

The major power consumers of the city such as street lighting, sewage treatment plant and others are operated in accordance with sustainable development and energy efficiency.

Taking the example of GEIGER with the construction of its own cogeneration plant, what is the importance of personal commitment to energy conservation?

The energy revolution can only succeed if all contribute to it, citizens, businesses, city and municipal utilities. Of course we welcome the commitment of companies that use energy efficient technology. Our municipal utilities are happy to offer you support in developing cost saving solutions for using energy more efficiently.

What types of renewable energies are available here and what role do they play in relation to the total energy consumption?

In the district of Ludwigsburg, solar energy and biomass are currently widely used.

With regard to wind power, the requirements are not given: weak wind area and dense population. We also promote the rational use of energy resources and the reduction of energy consumption. There is a great energy saving potential as Geiger shows with its own cogeneration unit. Bietigheim-Bissingen has a large number of companies and therefore relatively high power consumption - over 70 % are used by industry and commerce. Electricity from renewable energies currently represents about 25%. The district heating supply systems cover about 20% of the needs.



Jürgen Kessing has been mayor of Bietigheim-Bissingen since 2004.



Photo: SWBB

The municipal utilities of Bietigheim-Bissingen rely on renewable energies. (FLTR: CHP plant, biogas plant and hydropower station on the Enz)

■ Reference Object

Gold for energetic quality

The decisive factors for sustainability and optimal energy efficiency in new buildings are optimal thermal insulation, energy-efficient windows, the use of renewable energies and, not least, an automated sun protection system.

All these elements are to be found in the young urban district of 35.000 m² that has been built in Stuttgart on the site of the former exhibition grounds. It is a very ambitious architectural project which has been awarded with the gold certificate of sustainability by the German Sustainable Building Council (DGNB). The buildings are evaluated in different areas and the score shows the extent to which the requirements are fulfilled. For a gold certificate, a project requires a total score of at least 80 %.

The GEIGER motors which operate all the sun protection systems that have been installed contribute here - with their efficient energy technology and sustainability - to the success of this project.

The internationally renowned architects Baumschlager Eberle, David Chipperfield Architects, KCAP Architects Ortner & Ortner developed their individual architectural concepts to realize this ambitious urban project.



Photos: GEIGER

■ GEIGER cogeneration unit

GEIGER Energy Policy

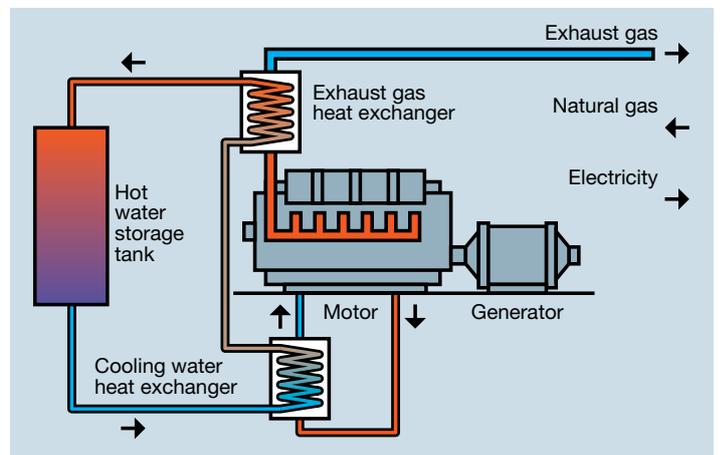
Energy efficiency can provide significant cost savings, enhances the competitiveness and contributes to climate and environment protection on a sustainable basis.

When replacing the heating system, GEIGER opted for a future-oriented energy technology: the company-owned cogeneration unit – Combined Heat and Power (CHP) – produces both electricity and heat. With an output of 207 KW, it is designed for use in the business sector and operates as follows: an internal combustion engine drives a generator that produces electricity. GEIGER generates itself 25 % of the electricity it needs. The resulting waste

heat is directly processed on the spot. It is fed into the heating system via heat exchanger and used for hot water production and radiator space heating. By opting for this type of energy, the company increases the security of supply and shows its commitment to ecological and sustainable development from which the GEIGER customers benefit: The saved costs have a positive impact on the product price. A most beneficial advantage!



GEIGER cogeneration unit and peak load boiler



Functional diagram of a CHP



Legal notice:
GEIGER Impulse
Issue 01/14

Editor:
Gerhard Geiger GmbH & Co. KG
Schleifmühle 6
D-74321 Bietigheim-Bissingen

Phone: +49(0)7142/938-0
Fax: +49(0)7142/938-230
E-Mail: info@geiger.de
Internet: www.geiger.de

■ Design-handheld-transmitter L-Concept

Aesthetics and functionality

The new GEIGER design-handheld-transmitter L-Concept is a further product design of the JUNG FORMdesign Company that combines aesthetics and functionality while enhancing the contemporary visual qualities of the sun protection product with respect to its functional aspect.

Well-conceived technical details are concealed behind the elegant and modern design. A visual display is integrated with LEDs on the top of the handheld transmitter. The control panel is easy to operate thanks to the soft touch features with tactile feedback. The wipe-clean high gloss finish surface and the grained bottom side combine attractive design with functional qualities such as easy and comfortable handling. The design-handheld-transmitter L-Concept is available in black or white as one-channel or multi-channel control. A wall holder is included.



■ Venetian Blind motors GJ56 .. E06 and E07

Premium equipment and functions

GEIGER is expanding its extensive product line GJ56.. for Venetian blinds with the Premium electronic motors E06 and E07. The additional functions offer greater security and a wider range of applications with an integrated SMI interface: a high-class equipment for the reliable Venetian blind motors.

The proven engine and brake concept of the GJ56.. motors is equipped in the Premium versions E06 and E07 with an additional limit stop switch which allows on the one hand a safety shutdown and which is used on the other hand as reference point for belt length compensation. The GJ56.. E07 also has a SMI interface for bus systems and can be operated as part of the automated building technology. A single SMI actuator can control up to 16 SMI motors simultaneously and

individually. The slats are adjustable with an accuracy of one degree. Both the exact location as well as possible defects is reported back to the controller. The E07 is most suitable for Venetian blind systems with automatic solar tracking.



■ Bevel gear for left and right hand installation

Always on the right side!

The bevel gears of the GEIGER series 444F6.., 446F6.. and 456F6.. have proven their reliability millions of times. Now these successful series have been updated with a very sophisticated design. Thanks to a built-in function switching over the rotation direction, each gear can be installed in the future either on the left-hand side or the right-hand side of the window: an innovative solution that greatly facilitates the assembly.

It is very easy to change the rotation direction of the bevel gear. The elaborated mechanism requires neither a complicated conversion nor any tool. A reliable lock prevents accidental switching. Since the gear has a continuous interior profile at the drive, the rotation direction of the crank rod remains the same on each installation side. The mechanical inner workings of the gear is almost unchanged, all previous advantages such as fast operation, free wheel clutch or long life time are preserved. Tubes with three different diameters can be used with adapters.



For gears pre-set for right fitting, turn tube drive to the left ...



... until the latching elements of the overrun clutch are released and the switch mechanism is free.



Turn switch mechanism to the right until it stops ...



... and turn tube drive to the right until the latching elements of the overrun clutch snap into place.

Quality

Quality is no accident! Quality is the result of an optimal interaction between design, manufacturing, assembly and quality management. All these sectors are closely related and controls are carried out at every stage of processing. Our goal is to achieve a **zero-defect production** through optimization of these processes. We now achieve a **quality score of 99,98 % with our bevel gears**. We keep on working hard!

Service guarantee

The performance and quality of our products are continuously monitored. Therefore we give a **5-year warranty on all our products including replacement costs**.

Should you have any technical queries or need information on how to use our products, just call the GEIGER Service Hotline – **+49 (0)7142 938 300** – which provides you with competent and reliable information 365 days a year and 24 hours a day. If, however, no solution can be found, a GEIGER technician will be on site within 5 working days.

■ Quick assembly system for bevel gears

Quick and safe assembly

For the new generation of bevel gears 444F... and 446F... GEIGER offers a new quick assembly system that allows you to save time and money.

The new fixation system is attached with the gear and the clamping plate on the bolt of the bracket and clamped with a screw. In this case, the screw is "operable" from both sides and allows a very accurate gear adjustment. Two bearings support the output shaft and reduce the radial forces to a minimum.



Gerhard Geiger GmbH & Co. KG
Schleifmühle 6
D-74321 Bietigheim-Bissingen
Phone: +49 (0) 7142/938-300
Fax: +49 (0) 7142/938-230
E-Mail: info@geiger.de
Internet: www.geiger.de