

# AKTUELL

THE VISSMANN MAGAZINE

4 | 2014

## **THE MARKETS IN WESTERN EUROPE**

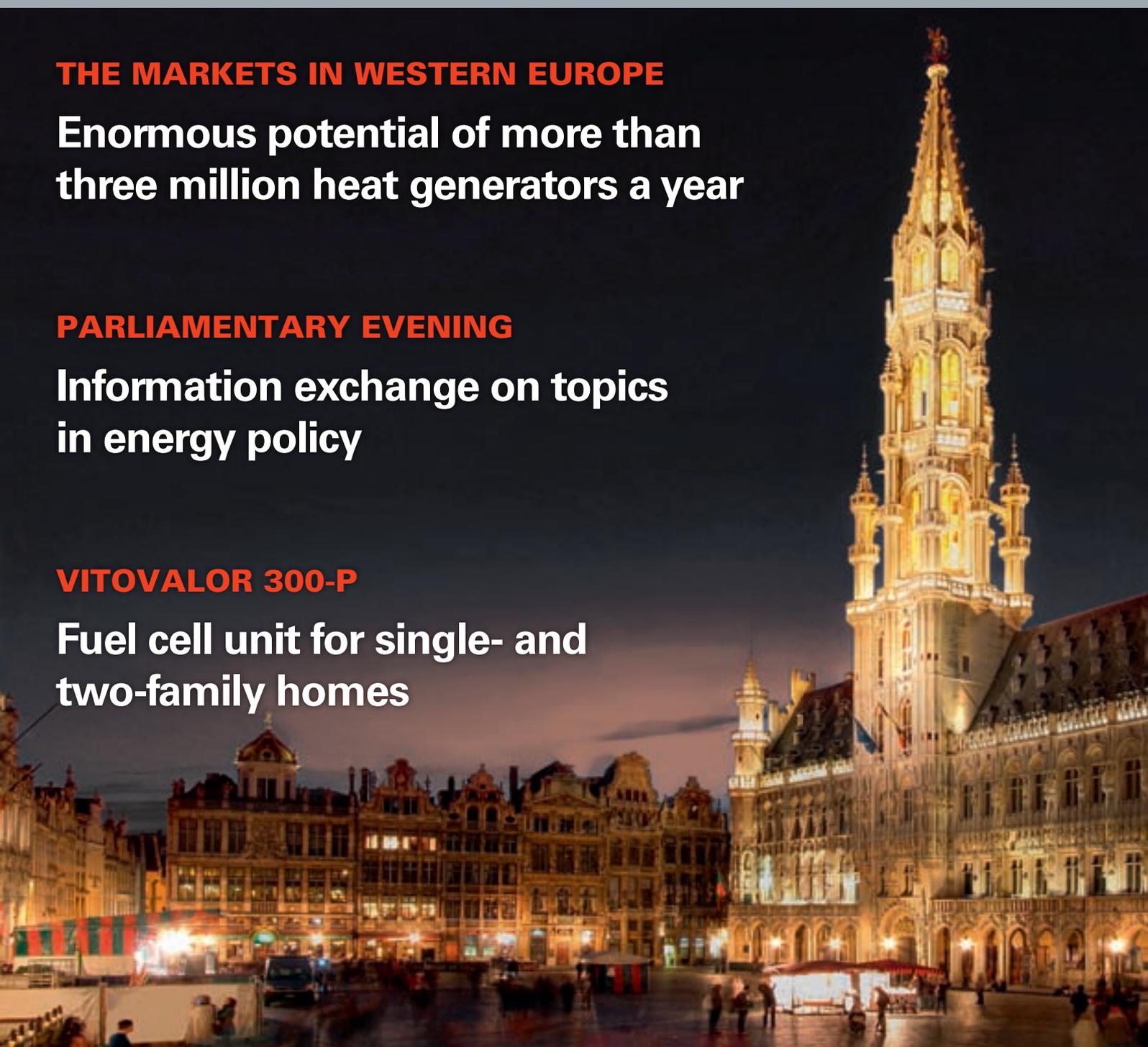
**Enormous potential of more than  
three million heat generators a year**

## **PARLIAMENTARY EVENING**

**Information exchange on topics  
in energy policy**

## **VITVALOR 300-P**

**Fuel cell unit for single- and  
two-family homes**







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Title: The Grand-Place featuring the Gothic city hall is one of the most popular sights of Bruxelles and is considered the landmark of the Belgian capital.

Cover page 2: Geared up for efficiency: the new Leica production and administration building in Wetzlar, Germany.

Cover page 3: View of the zeolite heat exchanger of the gas adsorption heat pump Vitosorp 200-F.

# Energy-efficient modernization: Will the breakthrough come in 2015?

Great expectations of energy-efficiency and climate protection programs

2 November 1, 2014, marks an important date for energy policy in Europe. After almost four years as EU Commissioner for Energy, Günther Oettinger handed over the office to his successor Miguel Arias Cañete. Previously Prime Minister of the state of Baden-Württemberg, Oettinger pragmatically fulfilled his function in Europe with considerable competence and prudence. Above all, he maintained a clear view of the significance of the heating market from the very beginning, ensuring that EU policies focused on leveraging its efficiency potential. At the same time, he did not shrink from criticizing Germany's energy policy when he felt it was pertinent to do so. To conclude his work as Commissioner, he played a significant role in clinching an agreement between Russia and Ukraine concerning the supply of gas for this winter.

## Major challenge for the new EU Commissioner

The new EU Commissioner for Energy Cañete faces major challenges. At its last summit in October 2014, the EU set very ambitious energy and climate targets. Energy consumption is to be cut by 27 percent by 2030 and CO<sub>2</sub> greenhouse gas emissions are to be decreased by at least 40 percent in comparison to 1990. Achieving these objectives will require huge efforts from some countries. So far, only Italy, Malta, Sweden, and Cyprus have fulfilled the obligation to report to the Commission on how they plan to meet the targets set out in the Energy Efficiency Directive. All 24 other member states have received a "letter of reprimand" from Brussels.

## Improved political framework

Germany has now – albeit with some delay – developed specific action plans for this purpose, which also involve improving the political framework. The National Plan of Action for Energy Efficiency (NAPE) initiated by the German Federal Ministry for Economic Affairs and Energy and the Climate Protection Action Program of the Ministry for the Environment were both passed by the cabinet on December 3, 2014. One of the main goals of the NAPE is to boost awareness for the cost effectiveness of energy-efficiency measures across all sectors. The German government will also consider whether it needs to introduce an energy efficiency law combining the relevant legal texts in order to effectively implement the action plan.

## More support for energy-saving modernization measures

The NAPE encompasses important measures for the heating market:

- ▶ tax deduction of energy-saving modernization,
- ▶ additional financial support from the German development bank program (KfW) and the market incentive program (MAP),
- ▶ and efficiency-labeling of existing systems.

The Climate Protection Action Program aims to exploit the potential to reduce CO<sub>2</sub> emissions, in particular those generated by the energy economy, as well as by industry, households, and transport.

## A ray of hope for 2015

The dual impact of the NAPE and the Climate Protection Action Program will

lay the foundations for the success of the sustainable energy era. A ray of hope for 2015, after expectations not having been fulfilled in 2014.

## Global economy prospects clouded

All in all, 2014 was an eventful year. From a European perspective, the world seemed to be largely at peace in January. By February, however, the Ukraine crisis was already developing into an armed conflict and violence was flaring up in the Middle East again. As a result, the world economy deteriorated considerably. And the ailing economies of some European countries also had a negative influence on important markets, which will have repercussions on the industry sooner or later.

## Weak industry climate

Our industry is already feeling the effects of this development. After a very promising start to 2014, apparently largely due to the mild winter weather conditions, the market started to take a downward path. This was caused by several factors: weak national markets due to the financial crisis, lower energy prices, and reluctance to invest in Germany specifically – as a result of the uncertain political framework. According to the statistics of the Association of the European Heating Industry, the market volume shrunk by three percent in 2014.

## Vital impetus from the world's leading trade fair ISH

The positive effects of the improved framework are expected to be reinforced by the impetus provided by ISH Energy. The world's leading trade fair, held from March 10 to 14, 2015, in Frankfurt, Germany, could also give the



"The world's leading trade fair ISH Energy 2015 could give the entire industry a tremendous boost."

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entire heating technology industry a tremendous boost. At the event, the focus will also be on energy efficiency and renewable energies. Viessmann will present a multitude of innovative solutions in this area.

#### **The new highlight:**

##### **Vitovalor 300-P**

Already in 2014, we launched a series of important new products on the market, above all the Vitovalor 300-P fuel cell unit. With this system, it is possible to implement highly efficient fuel cell technology in single- and two-family houses for the very first time.

##### **Viessmann Innovation Center in Allendorf (Eder)**

Alongside developing new products, we also introduced a series of vital new measures in 2014, which will enable the company to meet the challenges of the future.

For example, we started building the new Viessmann Innovation Center (VIC) at the company's headquarters in Allendorf. With an investment volume of 50 million euros, the new building functions as a technology center which has been set up for all departments involved in new product development. All development and innovation activities will be concentrated, made transparent, and optimized at the VIC.

##### **New offices for the Sales Department and Academy**

While the VIC is still under construction, staff have already moved into new, CO<sub>2</sub>-neutral sales offices in Dresden and Hanover, and a new training and sales center has been inaugurated in Faulquemont, France. Our French market partners can now be even more effectively trained in the vital expertise they need to deal with the increasingly complex technologies.

#### **Successfully shaping the future together**

All of these measures will secure and reinforce both your market position and ours. Working together with the competence and commitment of our trade partners, we will successfully shape the future.

I look forward to meeting many of you at ISH in March.

Prof. Dr. Martin Viessmann

# A glimmer of hope in the crisis

Oettinger's gas deal with Moscow and Kiev

by Prof. Dr. Friedbert Pflüger

4 Mediated by the EU, Russia and Ukraine have grasped their last chance before winter set in to reach a preliminary gas agreement regarding the volume of supply, price, and debt repayment. Shortly before the end of his term of office, EU Commissioner for Energy Günther Oettinger has pushed through one of his greatest achievements. Following tough negotiations, which had already started in June 2014, the governments in Kiev and Moscow as well as Gazprom and Naftogaz succeeded in concluding a comprehensive deal extending through until March 2015. This deal is a glimmer of hope in the middle of the severe crisis. It shows that agreement between Russia and Ukraine is possible if it is approached with persever-

ance and competence. In the never-ending negotiations, Oettinger managed to build trust on both sides – trust that no longer exists in the political relations between the two countries.

What would have happened if this agreement had not been reached? There would have only been losers.

At best, Ukraine would have been short of at least five billion cubic meters of gas this winter. There would have been a considerable risk that Kiev would tap into the transit pipeline in an act of desperation. And Russia, in turn, would have shut down its supply flowing to the EU, as it did previously in 2006 and 2009. If some of the EU countries had come to the rescue of Ukraine, possibly by providing a reverse-flow supply, this could have resulted in further supply blockages. In a nutshell, while a disagreement about gas can go practically unnoticed in the summer due to low levels of consumption, in winter it can lead to a very difficult supply situation for both households and companies, driving up gas prices and bringing about an escalation of the political situation. If EU mediation had broken down, it would have been particularly fatal for Ukraine: black-outs in the power supply, freezing people, an additional blow to the economy. Nevertheless Russia would also have suffered. Europe is Gazprom's most profitable market; 60 percent of its revenues come from EU states, and the Russian economy is already visibly suffering from Western sanctions.

According to the deal reached under Oettinger's mediation, Gazprom is to supply at least five billion cubic meters at a "winter price" of 385 dollars per 1,000 cubic meters to Kiev. Although this price is substantially higher than the Janukovitsch friendship price (268 dollars), it is still provisional. The final price will be fixed in summer 2015. Under the terms of the agreement, Ukraine also had to repay their debt of 3.1 billion dollars by the end of 2014.

In mediating this deal, the EU has greatly helped to defuse a dangerous conflict. Moreover, although criticism of Russia is justified, one thing is clear: Putin has done his best to remain a reliable gas supplier for the EU. There are strong indications that Russia is also keen to maintain a stable business relationship. And we should be interested in keeping it this way because mutual dependency has always helped to maintain peace, even in times when the East and the West were threatening to destroy each other with their nuclear arsenals.



## Personal details

Friedbert Pflüger, former Parliamentary State Secretary, has been Director of the European Centre for Energy and Resource Security, King's College London, since 2010.



After winning the Vorarlberg Innovation Award, the Vitoligno 300-C has now won another high-ranking award.

## German Design Award for Vitoligno 300-C

The compact, fully automatic pellet boiler Vitoligno 300 C has won the German Design Award 2015. The award is presented by the German Design Council in Frankfurt; the award ceremony will take place in February. This is the second high-ranking award that the boiler has won in 2014, after the Vorarlberg Innovation Award. The Vitoligno 300-C has been designed for use in single- and two-family homes. Even without an additional filter, it fulfills the requirements of the second level of the 1st German Federal Emission Control Act. Its ash compartment has to be emptied only once a year.

## TGA-Award 2014 for Schnepf-Neubau

In issue 3/2013 of "aktuell", we presented the new administrative building of Schnepf Planungsgruppe in Nagold, Baden-Württemberg, Germany, which is equipped with innovative heating technology from Viessmann. The building, with its forward-looking design, has now been awarded the German TGA-Award 2014 by the VGT German Association of Building Services in Berlin. The jury explained: "The Schnepf Planungsgruppe has shown with this building that energy-intensive office and administrative buildings can save

## Viessmann offers stipend

For the eighth time, the Berlin-based company Mercedöl-Feuerungsbau GmbH awarded their Eventus prizes for especially good performances to apprentices training to be sanitation, heating and air-conditioning engineering technicians. The Eventus-Prize honors the best Berlin-based apprentices in one year group in the above-mentioned trades. The stipend for a master qualification is worth about 6,000 euros and was donated by Viessmann. It was awarded to Paul Semotam from the company Tuskulum GmbH. The stipend covers all courses and examinations necessary for acquiring the title of master.

Viessmann has offered a joint training program with trade partner Mercedöl since 2010. In the course of this program, the apprentices are deployed in the trade business as well as in the Berlin plant and at the company's headquarters in Allendorf (Eder). Viessmann apprentices are also deployed for a period at Mercedöl to gain practical experience there.

energy with a clever energy concept, without dramatically exceeding the building costs necessary for other buildings with the same conditions of use and the same facilities". Company founder Klaus Schnepf was presented with the award by Carola Daniel, Managing Director of the VGT German Association of Building Services. The award ceremony took place during the Berlin Energy Forum 2014.



Viessmann won the golden phoenix in the category "Renewable energy".

## Golden phoenix for Viessmann

The building network operator Heinze gives out the "Architects' Darling Award" each year to manufacturers of products that are particularly popular with architects. The trophy in the category "Renewable energy", the golden phoenix, was this year awarded to Viessmann. 1,700 architects and planners had taken part in a large-scale survey organized by the Heinze market research team and had chosen their favorites before the phoenixes were awarded at a gala event in Celle, in Lower Saxony, Germany.

Viessmann's prize in the category "Renewable energy" honored once more their already much-acclaimed commitment to sustainability. The jury referred to their sustainability project for improved efficiency, which at the company's headquarters in Allendorf (Eder) had helped to reduce the consumption of fossil energy by two thirds and the CO<sub>2</sub> emissions by more than 80 percent. It also referred to the concept of the new CO<sub>2</sub>-neutral sales offices. The following reasons were given: "With a turnover of over 500 million euros in the area of renewable energy sources and growth rates in partial segments of up to 30 percent, the Viessmann works won the Architects' Darling Award and can justly claim that Germany's architects are convinced by their product".

*View of London, capital of the UK.  
With 1.7 million new installations every year, the  
UK is the largest heating market in Europe.*





## Five countries, three million heat generators a year

Heating and refrigeration  
markets in France, the UK, and  
the Benelux countries

**W**ith a combined gross domestic product of 5.3 million euros, the Western European countries France, the UK, Belgium, Luxembourg, and the Netherlands comprise one of the largest economic regions in the world. One in two of the 330 million people in the Euro zone lives in these countries. With a volume of three million heat generators a year, they are among the world's most important heating markets.

Roughly the same climatic conditions and thus a comparable heat demand are among the things that these five Western European countries have in common along with housing stock and existing systems which are in urgent need of modernization. However, France, the UK, and the Benelux countries are all taking different approaches when it comes to implementing the energy and climate policy targets, increased yet again at the EU summit in late October 2014.



## United Kingdom

With 1.7 million newly installed heat generators a year, the UK is not only the biggest heating market in Europe, it also has considerable potential with an expected growth of 14.4 percent by 2017.

Back in 2007, the British government with its Energy White Paper approved specific measures for increasing efficiency in addition to initial energy and climate protection targets. These measures include the compulsory use of condensing boilers in new builds and modernizations.

In the meantime, the UK has undertaken to reduce CO<sub>2</sub> emissions by 50 percent by 2025 or 80 percent by 2050. The share of renewable energies in power generation is to be increased to 30 percent by 2020. The heating market is addressed explicitly, too, as system operators, energy suppliers were required to replace some 250,000 heat generators by 2013 as part of the Energy Company Obligation (ECO) program.



*In the United Kingdom, the use of condensing boilers is not only mandatory in new builds, but for modernizations, too.*

Other measures or tools to modernize current systems include the Domestic Renewable Heat Incentive (Domestic RHI) introduced in April and the Green Deal in June 2014, which subsidizes investments in energy-efficient technologies with up to 9,600 euros per household. The focus is on heat pumps and solar thermal systems, the market significance of which is set to increase over the next few years.

*There is no escaping condensing technology either in the town or country due to the Energy White Paper. A house is heated by the Vitodens compact gas condensing boiler 222-F in Hook, a small town in Southern England.*





Compulsory from September 2015, the efficiency label for heating systems will ensure that condensing technology will also establish itself in France.



**France**

Unlike the UK, the use of condensing technology is not yet mandatory in France. Compulsory from September 2015, the efficiency label for heating systems will ensure that this efficient technology will also replace older technology in France and establish itself as a standard. The market already experienced growth of 5.6% to around 290,000 units for wall-mounted gas condensing boilers last year. By 2017, 410,000 of a total of 640,000 newly installed heat generators are to function using condensing technology.

The percentage growth turns out to be even greater for heat pumps, which are run on inexpensive electricity from nuclear power plants in France. Their market volume increased by almost 50 percent to 60,000 units in 2013 while sales of some 90,000 heat pumps are expected for 2017.

One key factor in this trend is the tax breaks for residential property modernization, which came into force on September 1, 2014. These breaks can be applied to up to 30 percent of materials costs for items such as con-

densing boilers, heat pumps, biomass boilers, or boiler solar heat packages. The French government has also launched a program which comprises modernization of energy systems in 500,000 residential units per year.

*A Bauhaus villa fully equipped with Viessmann technology in the French township of Mouvaux. In use: Vitodens 200-W wall-mounted gas condensing boiler, Vitosol 200-F solar collectors and a Vitocell 100-B dual-mode DHW cylinder.*





Heating center in unusual architecture: four Vitomax 200-HW supply a total output of 17 MW for district heating in the Dutch town of Amstelveen.



### Benelux countries

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In contrast to France, non-condensing technology only plays a minor role in the Benelux countries. In 2013, its market share stood at just four percent of the approximately 650,000 newly installed heat generators. By 2017, this share will be reduced yet again with the proportion being halved. Heat pumps will be the

main beneficiaries of this development. An average market growth of 50 percent to approximately 20,000 units is expected over the next three years.

Condensing technology remains a strong influence on the market, however. In the Netherlands, its share now stands at 95 percent in a county which

has substantial own natural gas deposits and a highly extensive supply network. In Belgium and Luxembourg, wall-mounted gas condensing boilers represent around 70 percent of newly installed heat generators with some 150,000 units every year. Here, the potential for growth stands at around one percent until 2017.



The Netherlands have substantial own natural gas deposits, although these are gradually disappearing. The photo shows Amsterdam, the capital.



### **Western Europe – also a key refrigeration market**

France, the UK, and the Benelux countries also have significant refrigeration markets. The annual turnover of some two billion euros represents more than 30 percent of the entire European market. In addition to cold rooms, there is also a strong demand for refrigeration units for the food retail industry. The large supermarket chains such as Carrefour in France and Tesco in the UK and the German discount supermarkets Aldi and Lidl, also very much present in these countries, generate an enormous demand for energy-efficient refrigeration cabinets and display cases.

*In Belgium and Luxembourg (photo), wall-mounted gas condensing units account for 70 percent of all newly installed heat generators.*

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*The large supermarket chains in France and the UK have a huge demand for refrigeration units.*

Computer graphics showing the new sales office in Paris, currently under construction



## 12 Viessmann in France, UK, and Benelux countries

Market with great potential

The European Union 20-20-20 climate and energy targets established in 2008 were substantially increased again at the EU summit on October 23. The package now aims to reduce greenhouse gas emissions by 40 percent by 2030, increase the share of renewable energies in total energy consumption to 27 percent and cut energy consumption by 27 percent. The objective is to achieve a largely climate-neutral economy by 2050.

With their enormous market potential of over three million heat generators a year, France, the UK, and the Benelux countries offer great leverage for achieving these targets. Viessmann has been present with a sales network in all five countries for decades and also has production sites in two of them.

Efficient, innovative systems made by Viessmann substantially help to reach climate and energy targets.

### France

Viessmann's French sales subsidiary was founded back in 1965 while the foundation stone for the company's first international production site was laid in Faulquemont, Lorraine, France, in 1971. With its 520 employees, the facility is an expertise center for solar heat and DHW cylinders today. It also manufactures thermal insulation for boilers and cylinders. In 2012, Viessmann acquired the two French manufacturers Sodiet Industrielle de Creil SA and Stein Energie Chaudières Industrielles SA from the Stein Energy Group. Purchasing the two companies has allowed Viessmann to extend its

product range for all fuels and output ranges to include smoke tube boilers, thus consolidating its market position.

### New sales office building in Paris

Not only the production division has experienced successful growth; the subsidiaries which attend to their customers via a two-stage sales channel have also expanded. There are sales offices in Faulquemont (head office), Aix-en-Provence, Lille, Lyon, Poitiers, Rennes, Strasbourg, Toulouse, and Paris, where a new building is currently being constructed, set to open its doors in fall this year.

With 1,900 square meters of usable floor space, the two-story building is based on the CO<sub>2</sub>-neutral design of sales offices in Germany: the first floor



*The French sales team in front of the new sales and training center in Faulquemont.*



*The Viessmann UK team in front of the company building in Telford.*

features offices while the seminar rooms on the second floor provide a venue for training sessions with up to 70 participants. The room will be heated and cooled entirely with renewable energies using sources such as a heat pump, an ice storage system, and solar energy.

**The UK**

As reported in the last edition, Viessmann's UK company celebrated its 25th anniversary in the summer. Operations were launched in the town of Telford, near Birmingham, in 1989 to establish a market for medium-

sized and industrial boilers as well as refrigeration and chilling units. Telford is still Viessmann UK's headquarters today, employing a workforce of almost 100.

**Telford: easily accessible central location**

Unlike France and Belgium, volume business in the UK is largely handled in a three-stage channel via wholesalers. As a result, there is no need for a close network of sales offices such as the ones in France or Belgium, especially as Telford enjoys a central location and excellent communication links.

**Belgium**

This year also saw the Viessmann subsidiary in Belgium celebrating an anniversary. The group's first international subsidiary was set up in the city of Verviers, not far from the German border, 50 years ago. Today, Viessmann Belgium's headquarters is located in Zaventem, near Brussels. There are other sales offices in Borinage, Kempen, Roeselare, and Welkenraedt. 150 employees attend to the needs of trade partners in Belgium; the Belgian subsidiary is also responsible for sales in Luxembourg.



*The Viessmann Netherlands team in front of the company buildings in Capelle.*

### **The Netherlands**

With 66,000 inhabitants, the town of Capelle aan den IJssel in the province of South Holland is home to Viessmann's Dutch subsidiary. Employees have been serving the market from there for almost 30 years.

### **HKB Ketelbouw**

The Dutch industrial boiler manufacturer HKB Ketelbouw has been part of the Viessmann Group since 2011. Based in Venlo, the company has 25 years' experience in building high-performance steam boilers and hot water systems and manufactures customized boilers with capacity to produce up to

120 MW or 120 tons of steam an hour. The Viessmann Group's worldwide sales operations ensure further growth and have also resulted in new approaches within HKB. For example, standardized Vitomax double flame tube boilers are also offered as well as tailor-made, large-scale plants. Situated directly on Venlo harbor, the HKB production site provides an ideal location as it renders special overland transport unnecessary. Working in cooperation with Viessmann Holzfeuerungsanlagen GmbH, the company also produces high-performance biomass systems to generate low-CO<sub>2</sub> steam and hot water.

### **Refrigeration technology**

Viessmann Kühleysteme GmbH is active in the refrigeration technology sector with subsidiaries in France (SAS Viessmann Technique du Froid) and the UK (Viessmann Refrigeration Systems Ltd.). The focus is still mainly on sales of cold rooms, but the aim is to promote the refrigeration unit business strongly in the future.

### **More than 50 cold rooms for the Olympic Games**

Viessmann Kühleysteme GmbH successfully completed a very special project in 2012: more than 50 large cold rooms were supplied for the Summer Olympic Games in London, reliably providing catering at the different competition venues.

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*The Viessmann Belgium team celebrated fifty years' existence of their national company this year.*

*Brussels offers visitors numerous sights – view of the Grand Place.*



## Brussels – the 'capital' of Europe

Political and cultural city with eventful history

The city of Brussels is not only the capital and official royal residence of the Kingdom of Belgium, but it is Europe's 'de facto' capital as well. As a key control center for the European Union, the seat of NATO's main headquarters and base for many national organizations, Brussels is a political, economic, and multi-cultural focal point. While the city itself has only 170,000 inhabitants, a total of 1.1 million people live in the Brussels metropolitan area.

### **Nucleus of the Kingdom of Belgium**

Legend has it that Brussels was founded by Saint Gaugericus back in the 6th century although the settlement was first officially recognized by a document issued by Otto the Great in 966. It became capital more than once: first, for the Duchy of Brabant in 1383 and then as the second capital of the United Kingdom of the Netherlands alongside The Hague from 1815. During the intervening period, it changed hands a number of times, falling under Hapsburg, Dutch, and French rule. Brussels was the starting point for the

Belgian revolution, which led to the formation of the Kingdom of Belgium in 1830.

### **Variety of languages**

Today's bilingual Brussels is a result of the Flemish-Walloon conflict in the 19th century and still remains a sensitive topic, not only in the capital, but in the rest of the country too. Besides the two official languages of Dutch and French, many more languages are spoken in today's Brussels, especially English. It is not only due to its multiple languages that Brussels is ideal as the seat of the EU. Its central location within the union and good transport links by air, road, and rail, and for shipping are also contributing factors in the city's selection as the seat for the European Council and the European Commission.

### **Numerous cultural sights**

Brussels has much more to offer than its EU institutions as the city is famous for its sights and for being a multicultural center of arts. Anyone exploring

Brussels should start with a visit to the Grand Place, listed as a UNESCO World Heritage Site in 1998 due to its ensemble of buildings featuring the Gothic city hall and Baroque facades; the city's Museum of Cocoa and Chocolate is very nearby.

Many other attractions are worth a visit, such as the Royal Galleries, the Designer Quarter, and the Atomium in Laeken, a landmark built for the 1958 World's Fair. The Mont des Arts in the center of the upper town has been home to some of Europe's most important museums since the 19th century.

### **Yet another "capital" title**

Brussels cultural offerings are made complete by its many theaters, La Monnaie Opera House, and a large music scene, ranging from music bars and concert halls through to techno clubs. No wonder then that Brussels added yet another "capital" title to its collection when it became European Capital of Culture for the year 2000.

# Five brands fully integrated

ESS, isocal, MSR, Köb and Mawera under Viessmann name

The trends towards particularly energy-efficient systems and the use of renewable energy have dominated the industry for the last few years. Through the acquisition of highly specialized small businesses, Viessmann has therefore extended its technology basis considerably and integrated key technologies that they could not have developed fast enough by themselves.

## Successful market entry with the Viessmann brand

Even if the name of the businesses remained unchanged at first, a step-by-step integration of product portfolio, sales, and corporate identity into the Viessmann Group followed, so that today, the Viessmann brand ensures successful entry to the market. The last stage was the complete integration of

the group companies: From the ESS Energie Systeme & Service GmbH the company Viessmann Kraft-Wärme-Kopplung GmbH was created, MSR-Solutions GmbH became Viessmann Hausautomation GmbH, and isocal HeizKühlsysteme GmbH is now Viessmann Eis-Energiespeicher GmbH.

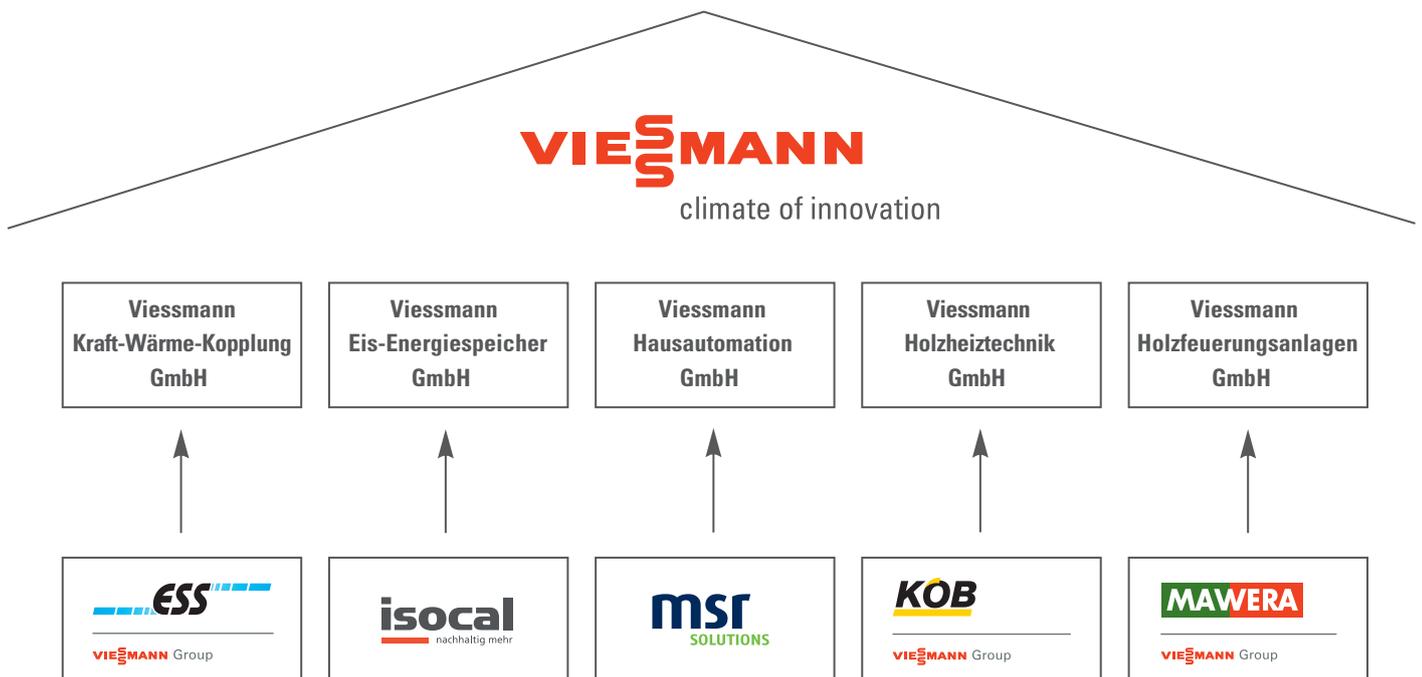
Two more businesses have followed suit in January: The Köb Holzheizsysteme GmbH became Viessmann Holzheiztechnik GmbH, and Mawera Holzfeuerungsanlagen Gesellschaft mbH is now called Viessmann Holzfeuerungsanlagen GmbH.

## A strong address for the whole communication platform

The strong Viessmann brand will thus in future be the address for all communication within the five companies,

and synergies can be exploited to an even greater degree. In addition, Viessmann's international renown will promote the further extension of international trade in the group companies. All integration measures, such as setting up an Internet presence and creating vehicle graphics, will be completed by the time of the ISH 2015.

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The new building for Viessmann Kraft-Wärme-Kopplung GmbH in Landsberg, Germany, has a production and storage area of 3,400 square meters.



## New building for production and administration

Viessmann Kraft-Wärme-Kopplung GmbH expands Landsberg site

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The Viessmann Kraft-Wärme-Kopplung GmbH (formerly ESS Energie Systeme & Service GmbH – see opposite page) has invested almost eight million euros in a new production and administration building in Landsberg (Bavaria). With a production and storage surface of 3,400 square meters, it is double the size of the previous site, which is close by and is now used as the After Sales department for the CHP service unit and the modernization of CHP units.

The new buildings enable Viessmann Kraft-Wärme-Kopplung GmbH to keep up with positive developments within the business and with the continuously growing need for more space which this entails. Since the company was acquired by the Viessmann Group in 2008, the product and services portfolio has been systematically expanded. At the same time, sales of

CHP units have increased more than six-fold. Today, the Viessmann Kraft-Wärme-Kopplung GmbH has the broadest range of products in the industry (6 to 530 kW<sub>el</sub> or 15 to 660 kW<sub>th</sub>), and also has modules with particularly long maintenance intervals. Viessmann has therefore developed into one of the three largest suppliers of CHP units in Germany. Since the company was founded in Landsberg, Germany, in 1983, a total of 3,000 CHP units have been produced, with 800 manufactured in this year alone.

### Conditions for growth

The new production and administration buildings have created the conditions for the progressive implementation of the Viessmann production system and so for further growth. Additional potential should be achieved through the development of new markets abroad.

### Personal details

#### Ulrich Ruwier

is Division  
Head for Wood-based Heating Technology and Combined Heat and Power Generation and on



October 1st, 2014, took over responsibility for the Viessmann production divisions in Landsberg, Wolfurt (Austria) and Dombovar (Hungary).

He can look back on many years of experience in management positions with leading energy technology manufacturers and is considered an experienced expert.



Panel discussion at the CHP Forum (from the left): Host Manfred Greis, Head of Company Communication, Ulrich Ruwier, Managing Director of Viessmann Kraft-Wärme-Kopplung GmbH, Dr. Joachim Pfeiffer, Spokesman for Economic Affairs and Energy Policy for the CDU/CSU German Bundestag parliamentary group, Thorsten Herdan, Head of the Department "Energy policy – Heat and efficiency" in the German Federal Ministry for Economic Affairs and Energy, Hans-Hermann Freischlad, Managing Director of Freischlad GbR.

## Viessmann CHP Forum

160 high-ranking experts attend event in Infocenter

**18** In November, around 160 trade partners met with high-ranking experts from industry and politics at the Viessmann Kraft-Wärme-Kopplungs-Forum in the Infocenter Allendorf. The lectures and discussions dealt with the role of combined heat and power generation (CHP) in a future energy supply concept and the opportunities this would afford for the industry.

### Electricity production and heat demand separated in time

Dr. Frank Voßloh, Managing Director of Viessmann Deutschland GmbH, emphasized in his opening speech that in future it would not be acceptable to "generate electricity and heat separately as much as we have in the past". For this reason, the CHP would have to play a significant role in all future debates. Voßloh said that even today it is theoretically possible "to cover the whole peak demand for electricity with windmills and photovoltaic systems", but it is necessary to consider that such a peak demand can also occur "on cold, cloudy, windless winter days". Combined heat and power generation

can make an important contribution to solving the problems that this causes. When used with buffer cylinders, it is also the ideal supplement to the renewable energy sources of wind and sun since "electricity production and heat demand are separated in time".

### Current information first-hand

Visitors from Berlin included the CDU/CSU Spokesman for Economic Affairs and Energy Policy in the Federal Parliament, Dr. Joachim Pfeiffer, and Thorsten Herdan, Head of the Department for "Energy policy – Heat and efficiency" in the German Federal Ministry for Economic Affairs and Energy. His department was primarily responsible for preparing the National Plan of Action for Energy Efficiency (NAPE). Dr. Pfeiffer and Thorsten Herdan reported on the current status of NAPE.

### Panel discussion: Policy meets practice

The following panel discussion on the subject of aligning policy with practice was chaired by Manfred Greis,

Viessmann's Corporate Communication Head. Participating in the discussion were Thorsten Herdan, Dr. Joachim Pfeiffer, Hans-Hermann Freischlad, Managing Director of Freischlad GbR that has planned 600 CHP plants up till now, along with Ulrich Ruwier, Managing Director of Viessmann Kraft-Wärme-Kopplung GmbH.

### Efficiency is the second pillar of the sustainable energy era

The discussion also focused on the National Plan of Action for Energy Efficiency (NAPE) initiated by the German Federal Ministry for Economic Affairs and Energy, and the German Federal Ministry for the Environment's Climate Protection Action Program. It was agreed that both programs have the potential to make an important contribution to the success of the sustainable energy era, because their combined effect when linked with the transition to renewable energy will be to make efficiency into the second pillar. It is now important to implement the proposed measures on a consistent basis.

# Parliamentary evening in the Hessian Representative Office

Information exchange on current topics in energy policy

Alongside extending the share of renewable energies, energy efficiency is the second pillar of the sustainable energy era. Every kilowatt hour of energy that is saved does not have to be generated, transported, and paid for. The heating market offers the greatest potential: It is the largest energy consumer and also has current systems that are in urgent need of modernization.

This was the important message of the parliamentary evening, which was hosted by Viessmann in the Hessian Representative Office in Berlin. More than 70 guests, among them members of the national parliament and representatives of the responsible ministries and industry associations, used the opportunity to exchange information about current energy policy topics.

Hesse's State Minister for Federal and European Affairs, Lucia Puttrich, emphasized in her opening speech as host the necessity of reducing the modernization backlog in existing buildings. This is also true for her own State, in which the modernization rate of 0.9 percent is far below the required level.

## National Action Plan for Energy efficiency

Thorsten Herdan, Departmental Manager in the German Federal Ministry for Economic Affairs and Energy, subsequently gave a briefing on the National Plan of Action for Energy Efficiency (NAPE). This plan describes the energy efficiency strategy of the German Federal Government for the current legislature period and comprises primarily these fields of action:

- ▶ Energy efficiency in existing buildings
- ▶ Energy efficiency as profit and business model
- ▶ Individual responsibility for energy efficiency
- ▶ Energy efficiency in the traffic sector

## Tax amortization as interim measure

National Plan of Action for Energy Efficiency (NAPE) allows tax amortization for the modernization of energy systems from the year 2015 as an interim measure. Also, an annual volume of 1 billion euros will be set aside for the modernization of residential buildings used by the owners or rented out.

The energy policy spokesmen from the German Bundestag parliamentary group gave their approval to the National Plan of Action for Energy Efficiency (NAPE). Member of Parliament, Dirk Becker (SPD), said that a framework with interlocking instruments and measures is required in order to realize the potential that is available in existing buildings.

Dr. Herlind Gundelach (CDU/CSU) emphasized that the individual situation of the house-owners must be taken into account to a greater degree than before in order to trigger investments in efficient technology. Above all, measures that are agreed on must be allowed to continue for longer than one legislature period, said Dr. Julia Verlinden (Bündnis 90/Die Grünen).

## Reduce costs for energy imports

Increasing energy efficiency in the heating market is also important for the national economy. The EU Commissioner Günther Oettinger sent a video message in which he made clear that the costs for energy imports could be considerably reduced within the whole EU. In conclusion, the reduction of the modernization backlog in existing buildings would make an important contribution to setting up a sustainable energy supply.



Information exchange on current topics in energy policy: Hesse's Minister of the Environment Lucia Puttrich (4th from left) with the German Federal Member of Parliament Dr. Herlind Gundelach and Dirk Becker, Thorsten Herdan from the German Federal Ministry for Economic Affairs and Energy, and Prof. Dr. Friedbert Pflüger. On the left are Viessmann Supervisory Board Members Klaus Gantner and Stefan Heer and the Chief Representative Manfred Greis.



## 2nd Viessmann Photovoltaics Day

First-hand information on the effects of the Amendment to the EEG

**20** The Amendment to the German Renewable Energies Act (EEG) of August 2014 envisages a guaranteed feed-in tariff for photovoltaic systems with an output of up to 500 kW only until January 1st, 2016. After this date, only owners of PV systems with a maximum power of 100 kW will enjoy guaranteed feed-in tariffs.

Operators of more powerful systems are therefore tasked with having to market their own surplus electricity. "Fit for the EEG 2014" was therefore the slogan of the 2nd Viessmann Photovoltaics Day that took place in the Info-center Allendorf (Eder). More than 100 trade partners, mainly electricians and solar technology fitters, took part in the event.

### **Solar power-capable heat pump Vitocal 161-A**

The Managing Director for Sales at Viessmann Photovoltaik GmbH, Thomas Elefant, gave an opening speech which was followed by a presentation on the new heat pump Vitocal 161-A

from Andreas Czulwick, an instructor at the Viessmann Academy. Its control system allows it to operate mainly on solar power from a photovoltaic system. In this way, it helps to increase the amount of self-generated electricity usage from locally produced electricity and so reduce electricity costs.

### **New business models**

Michael Vogtmann from the Franconian Regional Association of German Solar Energy gave a detailed description of the changes resulting from the EEG 2014 for photovoltaic systems in new and existing buildings. He then put forward some possible business models.

### **Direct marketing of PV electricity**

Daniel Hölder explained in his talk how the direct marketing of PV electricity could work. He is the Manager for Energy Policy at Clean Energy Sourcing AG. The business is located in Leipzig, Germany, and is one of the leading green energy providers and direct marketers of electricity from plants sponsored by the EEG.

### **Hints for practical application**

Günter Franke pointed out in his presentation what needs to be taken into consideration when installing a photovoltaic system. He is Managing Director of Franke Elektrotechnik GmbH as well as a consultant and instructor at the Viessmann Academy.

### **A glimpse at the industry's future**

In the event's concluding talk, Joachim Rupp, Commercial Managing Director of Viessmann Photovoltaik GmbH, offered a glimpse of the industry's future. He also announced a new service for all customers who visit the company's headquarters in Allendorf (Eder) in an electric car: It will be possible to charge up the vehicles at special carports to be constructed in the coming year.

# CO<sub>2</sub>-neutral sales office in Hanover inaugurated

Heat and electricity demands fully met by renewable energies

The Viessmann sales office in Hanover, Germany, has moved into a new building. A total of 3.5 million euros were invested in the site to help give better advice, support, and training to the trade partners in the region.

More than 100 trade partners came to the official inauguration ceremony as well as representatives from trade associations and business. They learned first hand about the potential for efficiency arising from the use of technology already available on the heating market. "This is the key to the success of the sustainable energy era", said the Managing Director of Viessmann Deutschland GmbH, Dr. Frank Voßloh, in his opening speech.

## Sustainability concept developed

Viessmann has developed its own sustainability concept for supplying heat and power to its sales offices in an energy-saving and environmentally friendly manner. It is linked to the Gold Standard of the German Sustainable Building Council (DGNB) and was implemented in Hanover. The 750 square meter building has a completely CO<sub>2</sub>-neutral supply of power and heat from renewable energy sources. It already fulfills the requirements of the directive on the energy performance of buildings (EPBD) for 2020.

## Heat pump to heat and cool building

The sales office has good transport links in its position on the Expo site and is heated and cooled with the aid of a brine/water heat pump. The 56 kW pump obtains its energy from eight geothermal probes, each 100 meters deep. Solar energy is also used in Hanover. Three vacuum tube collectors



The new Viessmann sales office in Hanover, Germany, was developed on the basis of an internal sustainability concept. The 750 square meter building fulfills the strictest efficiency standards.

mounted on the facade, with a surface of 6 square meters each, provide hot water to the building. 256 photovoltaic modules with a total output of 56.3 kWp supply electric power to be fed

into the grid. The energy concept also incorporates environmentally friendly electricity from renewable sources such as biomass, hydropower, and wind power.

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## Viessmann service technician TÜV-certified

Seal of approval for Technical Service department

Viessmann is the first company in the industry to have the competence of their service employees tested by an independent agency and has been certified by the TÜV Rheinland (German technical supervisory association). More than 280 employees of the Technical Service Department have verified their qualification in a written test and may now call themselves "Service technicians with a qualification approved by TÜV Rheinland".

The certification process is compulsory for all technical members of staff working in internal or external services and is regularly repeated. It is based on con-



Dr. Karola Tschöpe (TÜV (German technical supervisory association) Rheinland/PersCert TÜV) presented the TÜV certificate to Michael Weber, Managing Director of Viessmann Deutschland GmbH, and Alexander Toscher, Head of the Technical Service department (center).

tinuous testing of the qualification criteria and their adjustment to the progress of technology.

*The innovative fuel cell unit Vitovvalor 300-P is highly efficient in generating electricity and heat. Its efficiency allows single or two-family homes to save up to 40 percent on energy costs.*



# Vitovvalor 300-P

Award-winning fuel cell unit for single- and two-family homes

With Vitovvalor 300-P, the first product of its kind in the world, fuel cell technology has now become available for heat and power generation in single- and two-family homes for the first time. Viessmann received the renowned f-cell award from the Baden-Württemberg Ministry of the Environment, Climate Protection and the Energy Sector and Wirtschaftsförderung Region Stuttgart GmbH as part of the Fuel Cell Innovation Awards 2014 in October.

## Energy cost savings up to 40 percent

A device was developed in a joint venture with Japanese-based Panasonic. Compared with a gas condensing boiler or conventional purchase of mains electricity, the owner can save up to 40 percent energy costs. This power-generating heating system produces up to 15 kWh during the course of the day, enough to cover most household power requirements. This reduces the need to purchase expensive power from the public grid and the owner is not subject to future increases in electricity prices.

The heat produced when power is generated in the fuel cell is used for heating and DHW generation. peak load gas condensing boiler which switches on automatically is integrated for use on particularly cold days and for instant DHW generation when required.

## Attractive subsidies and investment grants

The fuel cell unit is subsidized by the German state as a particularly energy-efficient future technology. Owners thus receive 5.41 cents for each kWh generated as per the German Combined Heat and Power Generation Act. Moreover, the energy tax on fuel cell gas consumption is reimbursed at the end of the year. The electricity, gas, and heat meters required to provide conformity with requirements are already integrated into the unit.

The German states of Hesse, Baden-Württemberg, and Saxony also subsidize the purchase of fuel cell units with investment grants; in Hesse, this could be up to 17,500 euros. Other states in Germany also have similar financial aid programs in the pipeline. There is a full summary of the different funding options, detailed information, and applications online at [www.vitovvalor.de](http://www.vitovvalor.de).

## Advantages for trade partners

- ▶ Quick and easy installation (Plug & Power) thanks to pre-assembled components
- ▶ Only exhaust system required, no additional water supply connection needed
- ▶ Efficient operation at peak load thanks to integrated gas condensing boiler
- ▶ Easy to transport in two sections; footprint of just 0.65 m<sup>2</sup>
- ▶ Accessories for hydraulic and exhaust gas supply air system can be used from the established wall-mounted gas boiler range

## Advantages for owners

- ▶ CO<sub>2</sub> emissions reduced by up to 50 percent compared to centralized electricity generation and in-house heat generation
- ▶ Up to 40 percent savings on energy costs and no longer subject to increasing electricity prices
- ▶ Integrated electricity, gas, and heat meters to calculate public electricity subsidy and energy tax reimbursement
- ▶ Low-noise operation as with gas condensing boilers since there are no moving parts in the fuel cell module
- ▶ Remote operation and monitoring of current power generation data and maintenance information available on smartphone or tablet PC
- ▶ Reliable, time-tested technology – the fuel cell module has been used in Japan for six years; now installed in over 34,000 locations
- ▶ Reliable thanks to maintenance agreement with performance and functional warranty for all key components

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## Technical specifications

Fuel cell module:

- ▶ Electrical output: 750 W
- ▶ Thermal output: 1 kW
- ▶ Electrical efficiency: 37%
- ▶ Overall efficiency: 90%

Gas peak load condensing boiler:

- ▶ Thermal output: 5.5 to 19 kW
- ▶ Thermal efficiency: 98%/109%

# Vitoligno 300-H

## Fully automatic biomass boiler for woodchips and pellets

Heating with woodchips is highly economical since a kilowatt hour of heat generated using this renewable fuel costs around half as much as it does using oil. In addition to woodchips, the Vitoligno 300-H biomass boiler can also burn pellets as an alternative fuel. This means that the owners can choose between the two fuels as they wish. With a rated heat output of 80 to 100 kW, this boiler is especially suitable for large residential and commercial buildings.

### Automatic functions for greater comfort

The numerous automatic functions include an automatic fuel feed, automatic ignition, ash removal from the slide-in grate when required, and cleaning of the heat exchanger.

### Low emissions

With its weather-compensated controls and a wide modulation range of 1:3, the boiler adjusts its output precisely to the current heat demand and achieves a high degree of efficiency. Its staged combustion with a primary and secondary air feed ensures high efficiency and, consequently, low emissions and low fuel consumption. When burning pellets, the boiler meets the requirements of the second tier of the first German Federal Immission Control Act with no need for an additional filter.

### Ecotronic control unit

The Ecotronic control unit with integrated start-up assistant, illuminated display, and plain text messages can control up to four heating circuits with mixers. Heat can be distributed to a total of 24 heating circuits.

### Fuel feed from left or right as desired

The feed inlet for pellets or woodchips can be fitted either on the left- or right-hand side as required. This ensures that this heat generator can be flexibly installed depending on the structural conditions at the installation location, thus taking up less room. The optional pellet hopper holds 200 liters, meaning long intervals between refills. A large, lockable, mobile ash compartment ensures that ash can be removed easily without creating dust.

### Advantages for trade partners

- ▶ Flexible, space-saving installation thanks to fuel feed inlet which can be fitted on left or right
- ▶ Easy maintenance thanks to easy access to all key components
- ▶ Extensive range of accessories and matching fuel dispensing system

### Advantages for owners

- ▶ Long operating periods thanks to automatic ash removal
- ▶ Long, environmentally friendly combustion cycles thanks to Ecotronic control unit with intelligent buffer management
- ▶ Optimum convenience thanks to automatic ignition
- ▶ Efficient firing and burn-off process thanks to constant regulation by ventilation flaps
- ▶ High degree of efficiency and low emissions thanks to lambda control
- ▶ Eligible for grants by the German Federal Office of Economics and Export Control (BAFA) and the German development bank (KfW)

### Technical specifications

- ▶ Rated heat output: 80, 99, and 101 kW
- ▶ Degree of efficiency up to 95%
- ▶ Modulation range 1:3

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*The fully automatic biomass boiler Vitoligno 300-H can be fed either woodchips or pellets.*

*Up to 25 percent more economical than a condensing boiler, the gas adsorption heating system Vitosorp 200-F uses solar heat or geothermal energy.*



## Vitosorp 200-F

Gas condensing boiler with adsorption heat pump to exploit geothermal energy or solar heat

**T**ime-tested gas condensing technology and innovative zeolite heat pump technology in a single compact unit. Thanks to the use of free ambient heat from the ground or from a solar thermal system, the Vitosorp 200-F gas adsorption heating system requires up to 25% less fuel than conventional condensing boilers.

### Heat pump module provides most of annual heat output

The heat pump module covers the heat baseload and also produces the largest share of the annual heat output. It is powered by natural or liquid gas, which ensures significantly lower power consumption compared with standard electric heat pumps. Zeolite and water are used in refrigerant cycles. Neither substance is consumed; the heat pump process can be repeated to an almost unlimited extent. The integrated condensing module covers peaks in demand on particularly cold days. It also provides fast, convenient DHW generation.

### Flexible use of inexpensive heat sources

The gas adsorption heat pump design allows either geothermal energy or solar heat to be used as a source of heat. Geothermal flat-plate collectors, geothermal heat baskets, and solar collectors are available for new builds. Standard solar collectors can be used as a heat source to modernize systems. A geothermal probe is a cost-effective solution for both new builds and existing housing since, at 50 meters, holes only need to be drilled half as deep as those for conventional geothermal pumps. This means drilling costs are up to two-thirds lower.

### Simple installation

With dimensions compatible with standard kitchen grids and thanks to its virtually noise-free operation, the unit can be easily set up inside homes. It is just as easily installed as a compact solar condensing boiler. A start-up assistant provides help for all key unit settings.

### Advantages for trade partners

- ▶ Flexible installation and usage
- ▶ Can be used with solar heat or geothermal energy
- ▶ Installation and maintenance as for gas condensing boilers
- ▶ Simple hydraulic connection
- ▶ Easy to transport thanks to two separate modules
- ▶ Quickly operational without any errors thanks to start-up assistant
- ▶ Maintenance-free heat pump module
- ▶ Accessories and exhaust systems as for Vitodens gas condensing boilers

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### Advantages for owners

- ▶ Up to 25 percent less energy consumption
- ▶ Low-noise and reliable in operation, as gas condensing boilers
- ▶ Integrated, high-efficiency pump
- ▶ High level of DHW convenience due to DHW booster
- ▶ Environmentally friendly work media (zeolite and water)
- ▶ Easy to use Vitotronic control unit; remote control using app
- ▶ Eligible for grant under market incentive programs (MAP)
- ▶ Low maintenance costs

### Technical specifications

- ▶ 1.6 to 11 kW (DHW booster up to 15 kW)
- ▶ Rate of utilization up to 124% (Hs) at 35/28° C (as per VDI 4650-2)
- ▶ Maximum flow temperature: 75° C (recommended: < 55° C)



New Vitobloc 200 module with 530 kW electric and 660 kW thermal outputs.

**Technical specifications**

- ▶ Electrical output: 530 kW
- ▶ Thermal output: 660 kW
- ▶ Output modulation: 50- 100%
- ▶ Electrical efficiency: 39,5%

## Vitobloc 200

New CHP unit with 530 kW electrical output

The module Vitobloc 200 EM-530/660 is another addition to the selection of gas engine-powered combined heat and power generation units (CHP unit) in the top output range. The current portfolio now comprises eleven different output capacities from 6 to 530 kW electrical or from 15 to 660 kW thermal output. This means that there is an ideal module size available for every use.

Unlike other CHP units in this class, the exhaust gas heat exchanger is integrated into the housing in the new module. With a required space of a little more than 13 cubic meters, it is the most compact unit on the market and takes up very little room and vertical space. The certificate provided as per German Federal Association of the Energy and Water Industry (bdew) require-

ments ensures that the CHP unit can be easily integrated between medium-voltage and low-voltage networks. Strict network operator connection conditions are met. The optimum electrical efficiency remains constant throughout the unit's life cycle, ensuring that it is highly cost effective.

**Advantages for trade partners**

- ▶ Universal range of CHP units powered by natural gas
- ▶ Low space requirement

**Advantages for owners**

- ▶ Consistent electrical efficiency throughout life cycle
- ▶ Reliability in supply thanks to default mains replacement function
- ▶ High availability thanks to long maintenance intervals

## 26 Electricity storage system LVAH

Solar energy for maximum use of self-generated electricity

This new storage system in the Vitovolt range makes photovoltaic system operators largely non-dependent on external power supplies and generally eliminates their exposure to changes in electricity prices. It stores solar power generated, but not needed during sunshine hours, ready for use during the evening or night. This means consumption of self-generated electricity energy can be maximized and costs significantly reduced.

With a variable number of maintenance-free lithium-ion cells, the modular structure allows the system to be adapted to individual storage needs. Future cell technologies can also be easily integrated. The fireproof housing fits into a normal kitchen grid. Intelligent battery management and an interface for remote monitoring and maintenance via the Internet are already integrated.

**Advantages for trade partners**

- ▶ Configurable thanks to modular structure
- ▶ Integrated inverter and battery management
- ▶ Easy to transport and rapid installation thanks to cabinet slide-in design
- ▶ Rechargeable battery cells can be easily replaced – no wiring
- ▶ Remote maintenance possible via web portal

**Advantages for owners**

- ▶ Reduction in electricity purchasing costs thanks to maximized use of self-generated electricity
- ▶ High operational reliability thanks to redundant storage design
- ▶ Can be retrofit thanks to modular structure, also with future cell technologies
- ▶ Reliability in supply thanks to emergency power function



The new electricity storage system type LVAH can be adapted to the owner's individual requirements.

- ▶ Eligible for grant as per incentive program of the German development bank (KfW)
- ▶ Functional warranty for 7 years or 4,000 charge cycles
- ▶ Simple to retrofit for use with existing photovoltaic systems

**Technical specifications**

Storage capacity: 2.8 to 6.9 kWh  
Mains connection: 400 V AC, 3-phase



View of the largest dry fermentation plant in Europe at Fife, Scotland.

## Clean energy from biomass

Europe's largest dry fermentation plant is in Fife, Scotland.

**F**ife is one of 32 administrative districts and has over 360,000 inhabitants, making it one of the most highly populated areas in Scotland. The district lies on the east coast and extensive areas of it are used for agriculture. So organic waste comes from both the municipalities and from agriculture. Since the regional government in Edinburgh plans to use solely renewable energy for the power supply by the year 2020, the administration in Fife decided to make use of this resource by converting it into biogas for the sustainable generation of power and heat. To achieve this, the largest dry fermentation plant in Europe was constructed.

### **Biogas from different sorts of substrates**

The implementation of the project threw up the challenge of having to process mixed organic waste of different types. In addition, the separate collection, treatment, and conversion of the different types of organic waste into biogas using different fermentation technologies was to be avoided on cost grounds. A biogas plant should be able to ferment simultaneously food waste and green waste from agricultural businesses, garden, and landscape maintenance businesses, and also animal waste materials. This

demanding requirement is fulfilled exactly by the BIOFerm dry fermentation plant of Schmack Biogas.

The demands made on the basic material are very low in this process. It is not necessary to remove materials that are not required or to pre-treat the biomass. The process of converting the material to biogas is distributed over 14 fermenters in which the biomass is fermented in a vacuum in discontinuous mode. The plant is operated on a fully automated basis except for filling the fermenters and removing the fermented residues with wheel loaders.

### **14 fermenters in one plant**

Since December 2013, the biogas plant in the district of Fife processes annually up to 40,000 tonnes of mixed organic

waste from 160,000 households and 3,000 tonnes of food waste in 14 fermenters. During the fermentation period of 28 to 32 days, between 90 and 125 cubic meters of biogas per tonne of feedstock are produced from the organic waste. The fermentation residues are then pasteurized, before they are stored as useful compost for the agricultural industry.

The biogas is supplied to the energy network of the neighboring depot and there powers two CHP units with a total output of 1.4 MW. The electricity produced is fed into the public grid. The heat produced is sufficient to cover the needs of the depot and also, via a district heating network, the hospital in the town of Dunfermline. The biogas plant reduces the CO<sub>2</sub>-emissions of the district by over 7,200 tonnes per year.

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A total of 14 fermenters process up to 40,000 tonnes annually of mixed organic waste from 160,000 households, turning it into biogas.



## Efficient system technology for Leica production and administrative building

Architecturally impressive building is geared up to efficiency

28 The Leica brand is legendary with photographers throughout the world. It stands for excellent quality and a special culture of seeing. On the occasion of the celebrations for "100 years of Leica photography", a new production and administrative building was opened at the headquarters of Leica Camera AG in Wetzlar, Germany. It is completely geared up for efficiency. While on the ground floor cameras, lenses, and sporting optical products (binoculars, telescopic sights, and range-finders) are produced with the accuracy of a thousandth of a millimeter, a maximum efficiency, innovative Viessmann energy system is working in the basement to heat and cool the architecturally impressive building.

### Two CHP units for emergency power

Two combined heat and power generation units of the type Vitobloc 200 with 238 and 140 kW of electrical output cover the basic demand for electrical energy. In addition, they would take over the power supply and ensure stability for the production site in the event of a loss of voltage in the utilities company. The heat produced simultaneously with the operation is

used according to requirements either to cover the building's basic heating demand or to operate an absorption cooling device. Waste heat that is not currently needed can be stored in a buffer cylinder for later use. A Vitocrossal 200 gas condensing boiler with an output of 460 kW automatically switches in to cover heat demand peaks.

### 80 geothermal probes each 120 meters deep

In addition, a Viessmann brine/water industrial heat pump was installed to heat and cool the building. Its thermal output is 510 kW. Its energy for heating comes from a field with 80 geothermal probes which have been let into the ground 120 meters underneath the car park. If extra cooling is needed it can supplement the absorption unit with a cooling output of 482 kW. The cold water produced by the heat pump is stored in an open sprinkler tank and used for cooling the production systems. The heat pump and absorption cooling device are supplemented for particularly heavy cooling loads by two additional air-driven refrigeration machines functioning as peak load cold generators.



One of the two CHP units: If there is a loss of power, the Vitobloc 200 units take over the power supply and keep production going.

### Everything under control with the MultiModul management system

All the machines working in combination ensure a particularly efficient, economical operation. Also, the whole energy system of the new Leica building is monitored and controlled via the Viessmann control system MmM 300. This control system finds the most efficient combination of heat generator and refrigeration machine. The primary objective of the whole system is to achieve as long a run time as possible for the two CHP units, without leaving the heat produced during power generation unused.

## The new Leica headquarters in figures

On a footprint of around 27,000 square metres, the architect's office of Gruber + Kleine-Kraneburg has planned modern premises for production, administration, academy, and customer care for Leica Camera AG. The building, which was planned according to the latest energy stan-

dards, houses around 700 employees. Visitors, Leica fans and photography enthusiasts may visit open production areas, a discovery area, a Leica gallery with store, a photography studio, restaurant, and coffee-shop. 60 million euros were invested in the new building in the Leitz Park.

## PRACTICE / NEW MEDIA

*The industrial heat pump acquires its energy from a field with 80 geothermal probes which are inserted 120 meters deep into the ground.*

### Consumption 46 percent below requirements

The energy concept was developed by HPI Himmen Ingenieurgesellschaft, Cologne, Germany. Under the leadership of Graduate Engineer Jürgen Drolshagen, Managing Partner, energy consumption has been reduced to more than 46 percent below the level required by the German Energy Saving Ordinance 2009 (EnEV). The building was awarded the Green Building Certificate of the European Union and the German Sustainable Building Council (DGNB) pre-qualification in gold.



## Viessmann Community knowledge database

Help for all questions relating to daily work for heating contractors

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In aktuell 3-14, we presented a Viessmann Community service, "Ask Viessmann", which is mainly focused on homeowners. In this edition, we are presenting the knowledge database. This service contains a great deal of information ready for use by trade partners and will help them in their daily work.

### Time-tested solutions clearly explained

No matter whether a heat generator is being installed or maintenance is due, the knowledge database provides time-tested solutions which Technical Service department employees have compiled and clearly explained. Users

select products either by category or by using a convenient search function. The knowledge database is not created as a mere electronic reference work; trade partners can also comment on entries, ask questions, discuss topics with one another, and suggest other topics to be included in the database.

### Mobile version for smartphones and tablet PC

There is also a mobile version, so that the data base can be viewed more easily on smartphones and tablet computers. Highly useful feature: participants can use the subscription function to receive update notifications by email. Registration is simple – just click on the "Register" button at [www.viessmann-community.com](http://www.viessmann-community.com). All Viessmann trade partners can gain access to the knowledge base after entering their customer number and zip code.



*The contents of the knowledge database were compiled by Technical Service department employees.*



# The Viessmann junior team

Young athletes on their way to the top

**30** Their role models are Andrea Henkel, Eric Frenzel, or Carina Vogt. Like the three star athletes of the Viessmann Team, who won Olympic gold medals in biathlon, Nordic combined, and ski jumping, the talented young athletes in the Viessmann junior team also want to make it to the top – and they have what it takes to do so.

## 21 medals in last season's championships

The approximately 90 talents who are exclusively supported by Viessmann, have the necessary athletic potential. They delivered impressive proof of this at various junior world championships last winter, chalking up a total of 21 medals.

Biathlete Luise Kummer contributed to the team's positive performance by winning two golds and one silver medal in the single, relay, and pursuit events in Presque Isle, USA. In total, Germany's young biathletes picked up a total of nine medals, including three golds. In addition to Luise Kummer, the German junior relay team

with Philipp Nawrath, Roman Rees, Alexander Ketzer, and Matthias Dorfer also took the top podium position.

## Nordic Junior Ski World Championships

The Nordic athletes brought home four medals from the Junior World Championships in Val di Fiemme, Italy. Sarah Schaber won the skiathlon event. The combined athletes took three medals – mainly thanks to David Walde, who won a silver and bronze in the individual competitions and was runner-up with the rest of the team with Dominik Schwaar, Terence Weber, and Jakob Lange.

## Alpine Ski Junior World Championships

The alpine skiers also picked up four medals at the Junior World Championships in Jasná, Slovakia. At this event, Marina Wallner topped the table with three bronzes in the slalom, combined, and team event together with Patrizia Dorsch, Sebastian Holzmann, and David Ketterer. Thomas Dreßén won silver in the downhill event.

## Success in freestyle and ski cross

The junior freestyle and ski-cross athletes also returned from the World Championships with medals in tow. The ski-cross athletes Margarethe Aschauer and Valentin Egger performed strongly, taking podium positions with a bronze medal each. Sabrina Cakmakli was delighted to win two medals in free skiing. In addition to gold in the half pipe, the 19-year-old athlete picked up a bronze in slope style.

## The concept behind the junior team

Since the 2007/2008 season, Viessmann has sponsored the junior team, ensuring that all C-squad athletes of the German Ski Association (DSV) receive professional support. The extensive funding concept supports talents who are on the brink of becoming professional athletes.

This funding enables the DSV to plan maintenance of the costly squad and training system more effectively. Indeed, the athletes of a discipline frequently train in different training groups with as many as four different supervi-

ors. The funding provided by Viessmann enables the DSV to organize training camps, provide technical materials, and employ top trainers. The best athletes in each discipline are awarded the title "Viessmann Newcomer of the Year" annually. The following athletes received the accolade in 2014:

- ▶ Alpine: Marina Wallner and Thomas Dreßen
- ▶ Ski cross: Margarethe Aschauer and Valentin Egger
- ▶ Freestyle ski: Sabrina Cakmakli
- ▶ Biathlon: Luise Kummer and Marco Groß
- ▶ Cross-country: Sarah Schaber
- ▶ Nordic combined: David Welde
- ▶ Ski jumping: Gianina Ernst and Sebastian Bradatsch

## Denise Herrmann and Fabian Rießle join the Viessmann Team

Promising talents and top international athletes

Germany's best cross-country skier and most promising Nordic combined athlete both joined the Viessmann Team at the beginning of the new season. Denise Herrmann won a bronze medal with the German women's relay team at the 2014 Olympic Games in Sochi, Russia. She also almost brought home a second medal, ranking fourth in the team-sprint event together with Stefanie Böhler. Fabian Rießle picked up a silver medal together with the German relay team and a bronze in the single event.

### Open-minded and pleasant personalities

The 25-year-old athlete from Oberwiesenthal and the 23-year-old Nordic combined athlete from the Black Forest are among the German medal favorites for the 2015 Nordic Ski World Championships in Falun, Sweden, which will

be held from February 18 to March 2 this year. They fit into the Viessmann Team well thanks to their sports achievements and their ambitious, open-minded, and pleasant personalities that win the support of the public.

### On a par with established athletes

Before the Olympics started in winter 2013/2014, Denise Herrmann, one of the world's leading sprinters, had already chalked up four victories. Her performance has become more and more consistent over the past years. "I have become much more relaxed and experienced because I know that I can always counter." And Denise Herrmann has observed that her competitors have also noticed this.

### German relay team pick up silver

The name Fabian Rießle has been well-known in Nordic combined since



Fabian Rießle led the German relay team to an olympic silver medal.

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January 12, 2014, if not before. On that occasion, he won the team-sprint event together with Tino Edelmann at the World Cup in Chaux-Neuve, France. In Sochi, the Freiburg-born athlete came in third only to the Norwegians Jørgen Gråbak and Magnus Moan in the Olympic large-hill event. In addition, as former junior world champion, he clinched Germany's silver medal in the relay event as team finisher.

Fabian Rießle has had an outstanding start to the 2014/2015 winter sport season. As runner-up in two events in Lillehammer, he was entitled to wear the yellow jersey of the World Cup leader. Denise Herrmann has also started impressively. She also reached the finals in sprint in the Olympic town of Lillehammer, Norway, and has therefore won her ticket to the World Cup in Falun, Sweden, early on in the season.



Denise Herrmann has secured a place among the world's best cross-country skiers.

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# Skiing and tobogganing fun!

Winter sports are even more fun with the Viessmann Selection products

Even if you like to stay at home and be warm and cozy in wintertime, physical activity is a must – we all need it. Exercising in the cold winter months is much more fun with the Viessmann Selection high-quality, trendy products.



*uvex "p1us" – the lightest hard-shell helmet ever.*

### UVEX skiing helmet

The UVEX "p1us" is the lightest hardshell helmet that has ever been manufactured – and with no compromises on security for the wearer. On the contrary, the very hard, impact-resistant outer shell paired with the shock-absorbing and cold-insulating inside ensures supreme comfort and maximum security. Closable air channels inside the helmet provide draft-free cooling with the air intake and guarantee that the inside remains dry and warm during ventilation. Your ears are also protected by a special sound-permeable membrane.



*It is robust and durable with a retro design that is an absolute eye catcher – the Viessmann Selection horn toboggan.*

### Horn toboggan

Young and old alike have a ball tobogganing – and even more so with this retro model. The traditional toboggan has a comfortable and low-maintenance synthetic-sling seat. The toboggan is made out of glued beech wood and the runners are equipped with curved steel slides. This model has permanently remained in fashion and is very robust and durable.

### Nordic DSV hat

The original team knitted hat featuring the DSV and Viessmann sponsor logos meets the highest demands. So it is no surprise that the Viessmann Team athletes also wear this Adidas model. Made from a blended fabric, the hat fits perfectly on every head. An extra fleece inlay strip all the way around additionally protects your ears and forehead from the cold.



*A must for true fans: the original knitted team hat featuring the DSV and Viessmann sponsor logos.*



*Thanks to PrimaLoft material, the feel-good effect is guaranteed in the Adidas "Ndosphere" jacket.*

### Adidas "Ndosphere"

#### PrimaLoft jacket

You are guaranteed to feel good in this very light outdoor jacket with a sporty design. The PrimaLoft material keeps you nice and warm, and stretch inserts at the sides and back ensure maximum freedom of movement. The special fabric on the inside provides optimum evaporative cooling and odor control.



