

Registered in 2010

Refurbishment

Type of building:

Industrial

Area:

4.601 m²

Reference value:

314,4 kWh/m²yr

Primary energy demand:

192,6 kWh/m²yr

Energy savings:

38,7%

Investment:

n/a

Annual savings:

n/a

B30 Produktionshalle

Berlin, Germany

This GreenBuilding project is a refurbishment of an industrial building. The construction dates back to 1970. The net floor surface is 4.601 m².

The main technical measures adopted in order to save energy for heating are the followings: improvement of regulation at secondary system, outdoor-temperature regulation, installation of thermostatic valves and of well dimensioned heating pumps with power regulation, improvement of hydraulic system, division of the heating circuits.

In the lighting system fluorescent lamps have replaced the old inefficient ones, a control system have been adopted with daylight response.



Bürogebäude Münster N 20

Nevinghoff 20, 48147 Münster, Germany

The project is a refurbishment intervention. The building was constructed between 1980 and 1989. The refurbishment took place in 2009. It is an office building with 5 floors with a total area of 2.591 m². The building is used 251 days/year, 10 hours/day. The envelope U value W/m²K is 0,406.

The most important actions that have been taken are the followings:

- Heat supply by district heating with energy-saving pumps
- Illumination with T5 lamps with daylight dependent control and movement detectors.
- Ventilated façade with 120mm mineral insulation on 16 cm concrete structural shell.
- Windows with 2-fold glazing U value 1,1 W/m²K



Registered in 2011

Refurbishment

Type of building:

Office

Area:

2.591 m²

Before refurbishment:

271,00 kWh/m²yr

Primary energy demand:

163,00 kWh/m²yr

Energy savings:

39,8%

Investment:

n/a

Annual savings:

n/a

DEKA

Immobilien Invest
GmbH



Registered in 2010

Refurbishment

Type of building:

Commercial

Area:

45.701 m²

Before refurbishment:

131,00 kWh/m²yr

Primary energy demand:

98,2 kWh/m²yr

Energy savings:

25 %

Investment:

n/a

Annual savings:

n/a

Gerngross City Centre Wien

Mariahilfer Strasse 42-48, A-1070 Wien, Austria

This project is a refurbishment of a shopping mall with retail area and restaurant. The gross floor area after the intervention amounts to 45.701 m². The main technical measures adopted in order to save energy are the followings: optimization of the heating control system, refurbishment of the building envelope, replacement of lighting system with efficient fluorescent tubes and LED technology, placement of a rotary heat exchanger with 4 ventilation systems and one connected circuit system.

The total energy demand (heating and cooling) decreased from 5.991.475 kWh/year to 4.490.610 kWh/year, which means from 131 kWh/m² year to 98.2 kWh/m² year, with a saving of 25.05%.



Derag Living Hotel Campo dei Fiori

Utzschneiderstrasse 3, 80469, München, Germany

This project is a complete renovation of an existing residence building of the 1980s. Now is a four star hotel with nine floors in total.

The intervention improved the following: entirely new heat supply by hybrid solar system combined with air heat pump; ventilation with heat recovery; photovoltaic plant; LED lighting throughout the building; the grey-water (sewage) of the showers is re-used for toilet flushing. To conserve water, steam is used for personal hygiene in the showers. Steam is also used to clean up rooms. New ventilated façade with new aluminum windows. All windows have automatic mobile external shading. The envelope U-value is $0.46 \text{ W/m}^2/\text{K}$. The primary energy generated from the photovoltaic plant amounts to 548.722 kWh/year.



Registered in 2011

Refurbishment

Type of building:

Hotel

Area:

1.399 m²

Before refurbishment:

741,13 kWh/m²yr

Primary energy demand:

392,22 kWh/m²yr

Energy savings:

47%

Investment:

n/a

Annual savings:

n/a

Award 2012



Dickenbrok B+B GmbH & Co KG

Registered in 2011

New Building

Type of building:

Office (and retail)

Area:

2.050 m²

Reference value:

139,16 kWh/m²yr

Primary energy demand:

103,54 kWh/m²yr

Energy savings:

25,6%

Investment:

3 Mio Euro

Annual savings:

n/a

HF, M.82 Office and Retail Building

Mindener Strasse Herford, Germany

This new building will be located on a main road in Herford, North Rhine –Westphalia. It comprises two user types: approx. 550 m² of retail space at the ground floor and 1500 m² of office space in the first, second and third floor.

The building's materials consist of steel and concrete, mineral glass and also wood. The façade will be equipped with a thermal insulation composite system. The average envelope U value is 0,305 W/m²/K. The heating production system will be methane boiler. Also a co-generator plant will be provided. Ventilation is with heat recovery (75% efficiency).



Mörviken 2:102, Stigbygeln 2 and Tyr Valhall 10

Östersund, Sweden

Diös Fastigheter AB is a Sweden-based company active within the real estate sector. The Company is engaged in the acquisition, development, management and sale of primarily commercial real estate property. It has been welcomed in the GB Programme with 3 different buildings.

Mörviken 2:102 is a refurbishment intervention. This building hosts a shop and a library. A new heat recycling from the grocery store has been provided and new “air curtain” in the garage prevents heated air to leak to the outdoor atmosphere.

Stigbygeln 2 is an office building also been refurbished. Here new ventilation units with rotating heat exchanger have been placed and also new lighting fixtures T5 with HF fitting.

Tyr Valhall 10 is also a refurbished intervention on an office building. In these case all five ventilation units were replaced with three new units provide with heat recovery. Air flows were adjusted.

Photo of Stigbygeln 2



Diös
Fastigheter AB



Registered in 2010

Refurbishment

Type of building:

Retail , book shop and
offices

Primary energy demand:

168,00 kWh/m² yr

Energy saving: 37%

Primary energy demand:

112,00 kWh/m² yr

Energy saving: 31%

Primary energy demand:

156,00 kWh/m² yr

Energy saving: 32%

Registered in 2010

Refurbishment - 2010

Type of building:

Office

Area:

33.691 m²

Before refurbishment:

479,00 kWh/m² yr

Primary energy demand:

285,00 kWh/m² yr

Energy savings:

40,5%

Investment:

n/a

Annual savings:

n/a

Citihaus 1

Platz der Republik 2, 60265 Frankfurt - Germany

This office building was constructed between 1970 and 1979. In 2009, within the GB Programme, the refurbishment started. The net floor surface is of 33.691 m². The construction has 44 floors.

For the heating system the main measures taken to improve energy efficiency are the followings: installation of well dimensioned pumps with power regulation and switch from gas boiler to district heating.

For the building envelope: solar control double glazed unit "soft coating" (6mm spectral selective) and Aluminum with thermal break.

The consumption decreased from 497 kWh/m² year. to 285 kWh/m² year, with a saving of 43%.





Park Post•pu A, Park Post•pu B, Park Post•u
C, Park Post•u D
Warsaw, Poland

Park Post•pu is a complex of four A-class office buildings situated at ul. Post•pu 21 in the Mokotów business district, Warsaw. The four buildings have a total usable area of 34.000m².

All four buildings have seven above-ground floors and two underground floors for a car park. The office space of the building is 8.115 m², of Park Post•pu B is 7.094 m², of Park Post•pu C is 6.920 m² and of Park Post•pu D is 6.610 m².

For all four buildings the following measures have been adopted:

Buildings envelope with very low heat values: Walls: $U=0.24 \text{ W/m}^2\text{K}$; windows (double glazed) $U= 1.4 \text{ W/m}^2\text{K}$. The all building is equipped with energy efficient lamps. In garage and toilet the light are activated by motion sensors.

External façade lighting is controlled as function of time and intensity of natural light through the Building Management System.

Ventilation system is equipped with a rotary heat exchanger and highly efficient fans. The cooling heat exchangers are equipped with chiller unit with free cooling system.



Registered in 2010

New building

Type of building:

Office

Total Area: 34.000 m²

Park Post•u A

Park Post•u B

Park Post•u C

Park Post•u D

Reference Value:

676 kWh/m²yr

658 kWh/m²yr

631 kWh/m²yr

595 kWh/m²yr

Primary energy demand:

490 kWh/m²yr

470 kWh/m²yr

446 kWh/m²yr

424 kWh/m²yr

Energy savings:

27,6 %

28,5 %

29,3%

28,7 %



Registered in 2010

Refurbishment

Type of building:

Office

Area:

n/a

Before refurbishment:

134,00 kWh/m²yr

Primary energy demand:

99,00 kWh/m²yr

Energy savings:

26%

Investment:

n/a

Annual savings:

n/a

Tingstadsvassen 26:5

Göteborg, Sweden

This building hosts offices, retails and warehouse. Was constructed in 1988. In 2008 was refurbished and welcomed in the Green Building Programme in 2010.

To reduce the energy consumption for heating and to achieve the energy saving by 26%, the following actions have been taken: replacement of an old gas boiler to a new condensing gas boiler with high efficiency; replacement of the control and regulation system to a new system; changing the hot water from being heated by electricity to gas; one of the two water heater was turned off.





New ECB Premises

Sonnemannstrasse 20, 60314 Frankfurt am main,
Germany

The construction of the new building for ECB Premises started in 2010. The net floor area of this office building will be of 146.000 m².

For the heating system is foreseen an optimization of the heating circuits division and the activation of week-end drawdown. For cooling the chiller circuit control will have variable speed strategies, automatic adjustment of pressures. Fluorescent lamps will replace incandescent lamps and the system will be equipped with occupancy linking controls and daylight responsive controls. All the building will be monitored by a Building Energy Management System.



Registered in 2010

New Building

Type of building:

Office

Area:

146.000 m²

Reference value:

223,5 kWh/m² yr

Primary energy demand:

158,3 kWh/m² yr

Energy savings:

29,2%

Investment:

n/a

Annual savings:

n/a



Registered in 2011

Refurbishment

Type of building:

Office

Area:

n/a

Before refurbishment:

105,06 kWh/m²yr

Primary energy demand:

58,10 kWh/m²yr

Energy savings:

44,7 %

Investment:

n/a

Annual savings:

n/a

Fräsaren 10

Solna, Sweden

This project is a refurbishment intervention.

The building was refurbished a first time in 1993 and the last time in 2010.

The building houses offices and a grocery store. It has 5 floors.

District heating and district cooling will guarantee supply of heating and cooling. Renewable electricity is generated by certified Nordic hydropower. Automatic regulation and control will safeguard functions for heat recycling, cooling and post-heating. Energy controllers will use a web-based energy follow-up database to analyse data from system within the building.



Fastighets AB Briggen



Reuterdahl

Lund, Sweden

This intervention is a refurbishment of an office building which was constructed in 1990.

The ventilation has been replaced and is today regulated on/off by timer and the airflow is adjusted to the outside air temperature. The second measure to be implemented was the installation of a new system to regulate and monitor the technical system. This gave new possibilities to control and supervise, for example runtimes and temperatures.

Before the refurbishment the building was consuming 182 kWh/m²year (measure taken in 2007). Now it has been lowered to 128 kWh/m²year, 30% less.



Registered in 2011

Refurbishment

Type of building:

Office

Area:

n/a

Before refurbishment:

182,00 kWh/m²yr

Primary energy demand:

128,00 kWh/m²yr

Energy savings:

30%

Investment:

n/a

Annual savings:

n/a

Fastighets AB Brostaden

BROSTADEN

Registered in 2010

New Building

Type of building:

Commercial

Area:

11.000 m²

Reference value:

n/a

Primary energy demand:

69,2 kWh/m²yr

Energy savings:

52,4%

Investment:

n/a

Annual savings:

n/a

Award 2010



Best Corporate
Partner

Svenska Bil (Smista Allé)

Johanneshov, Sweden

This GreenBuilding project is a new building constructed in 2008.

Is a car show room with a total surface of 11.000 m².

The following technical measures have been adopted in order to save energy: innovative fan unit technology; innovative layout of the fan unit area to exclude the cooling system entirely; improved insulation values of all façade glazing.

The energy use decreased to 69,2 kWh/m²year with an energy reduction of 52,4% compared to law requirements.





Göteborg Stampen 9:31

Göteborg, Sweden

This office building was constructed in 1976 and is located in central Gothenburg. It has 20.000 m² for office space and 3.000 m² for garage space. Between 2007 and 2009 was refurbished. Ventilation units for offices and garage were replaced by new heat recovery units. Before the intervention there were three cooling units on the roof for comfort cooling. These units were removed and the property has been connected to district cooling. The properties control and monitoring for heat, ventilation and cooling are mainly managed remotely.

The energy consumption decreased from 110,6 kWh/m² year to 82 kWh/m² year, with a saving of 25,1%.



Registered in 2010

Refurbishment

Type of building:

Office

Area:

20.000 m²

Before refurbishment:

110,60 kWh/m²yr

Primary energy demand:

82,0 kWh/m²yr

Energy savings:

25,9 %

Investment:

n/a

Annual savings:

n/a

Fastighets AB LE Lundberg



Registered in 2011

Refurbishment

Type of building:

Office

Area:

6.450m²

Before refurbishment:

100,0 kWh/m²yr

Primary energy demand:

69,6 kWh/m²yr

Energy savings:

30,4%

Investment:

n/a

Annual savings:

n/a

Jönköping Grundlagen 5

Norrköping, Sweden

The building is located in central Jönköping and was built in 1987. The leasable space amounts to approximately 6.450 m² and comprises offices (93%) and garages (7%).

Energy and water consumption are monitored continuously. Units for heat, ventilation and cooling are mainly controlled remotely and monitored via the Internet.





KV Gunnar Gröpe

Sundswall, Sweden

Norrporten is one of the Sweden largest real estate company. Currently owns and manage 138 buildings and has 94 employees. The company has three major environmental priorities: to economize energy in property management, to manage waste at construction and demolition and to avoid environmental and health damaging substance in construction projects.

The Gunnar Gröpe block consists mostly of offices and staff-area, but also hosts the district court. The building was built in 1975 and refurbished in 2010.

The old ventilation-units have been replaced by new ones with better energy performance. The old units had battery heat exchange while the new have a rotating heat exchanger. The old temperature efficiency was measured to be 25% less, and the efficiency of the heat recovery of the new ventilation-units is 75%. Another energy step is to use VAV- ventilation which decreased the air flow to about 70%. This also leads to a decreasing usage of electricity because of the new fans efficiency and their speed control.



Registered in 2010

Refurbishment

Type of building:

Office

Area:

n/a

Before refurbishment:

122,00 kWh/m²yr

Primary energy demand:

81,00 kWh/m²yr

Energy savings:

28%

Investment:

n/a

Annual savings:

n/a

Registered in 2010

New Building

Type of building:

Office (and retail)

Area:

10.371 m²

Reference value:

n/a

Primary energy demand:

71,70 kWh/m²yr

Energy savings:

50,7%

Investment:

n/a

Annual savings:

n/a

Kv Kregjaren 2

Stockholm, Sweden

This new retail and office building is located in Stockholm. It will have an estimated heated area of 10.371 m² distributed on 8 floors inclusive of basement. In the basement technique equipment's areas are located, at floor 2-4 shops, at top floors offices. The building is provided with district heating and cooling. All ventilation units are provided with heat recovery. For offices also cooling recovery is used. All consumptions are measured for easier follow-up work of energy use.

The energy use of the building amount to 71,7 kWh/m² year, which gives an energy reduction of 50,7% less compared to requirements according to Swedish law.





Office Park 1 and Office Park 2

Wien- Flughafen, Postfach 1 - Austria

Office Park 1 is a new office building constructed between 2001 and 2005. Its gross floor area is of 31.925 m² and has 13 floors. It is supplied by local district heating with waste heat recovery of nearby refinery. Ventilation is equipped with heat recovery (65%). Cooling is supplied by cooling ceiling in combination with displacement ventilation. The source is a convention chiller. The building envelope has been optimized with a curtain-type ventilated glass façade and with external sun shadings. The annual heating demand amounts to 929.923 kWh/year, which is 26.29% below the legal value. The cooling demands amounts to 548 kWh/year, which is 99.53% below the legal value. **Office Park 2** is also a new office building and has been constructed between 2006 and 2007. Its gross floor area is of 23.885 m² and has 11 floors. It is supplied by local district heating and has a highly efficient control and regulation system. Ventilation in the office is equipped with a heat and moisture exchanger (enthalpy rotor with humidity recovery). The lighting system is equipped with highly efficient fluorescent and compact fluorescent lamps. Local district cooling is provided. The envelope, like for Office Park 1, has been optimized with a curtain-type ventilated glass façade and with external sun shadings. The annual heating demand amounts to 626.029 kWh/year, which is 35.52% below the legal value.



Registered in 2010

New Building

Type of building:

Office

Park 1 Area:

31.925 m²

Park 2 Area

23.885 m²

Energy savings Park 1:

26,29%

Energy savings Park 2:

35,52%



Registered in 2011

Refurbishment

Type of building:

Office (and retail)

Area:

n/a

Before refurbishment:

n/a

Primary energy demand:

108,00 kWh/m²yr

Energy savings:

40%

Investment:

n/a

Annual savings:

n/a

Hägern 11

Luleå, Sweden

The Galären Group is a real estate owner, which administrates about 140.000 m² of commercial building and about 350 apartments.

The refurbishment of this office/retail building (built in 1968) include mainly the following measurements:

Replacement of windows with a U-value from 1.8 to 1.2 W/m²K for the entire building.

New air handling units with rotary heat exchanger and cooling unit with cooling recovery.

Conversion from direct electricity to district heating.



Strandbad Mannheim

Strandbadweg 1, 68199 Mannheim, Germany

This new building is a restaurant on a swimming bath-lido at the banks of the river Rhine.

It has a net floor area of 472 m².

The heating is supplied by a ground source heat pump with optimization of the regulation and activation of weekend-drawdown. No cooling is installed but a ventilation plant with heat recovery (75% efficiency).

For the lighting system a selection of energy efficient lamps has been chosen.

The annual primary energy demand according to building regulation in force would be 765 kWh/m² year. The achieved annual primary energy demand in this building is 532,2 kWh/m² year, which gives a saving of 30, %.



Registered in 2010

New Building

Type of building:

Sports and leisure

Area:

472 m²

Reference value:

765,00 kWh/m²yr

Primary energy demand:

532,2 kWh/m²yr

Energy savings:

30%

Investment:

n/a

Annual savings:

n/a

Gebrüder Plenter Gbr

Registered in 2010

New Building

Type of building:

Industrial/agrarian

Area:

1.214 m²

Reference value:

141,10 kWh/m²yr

Primary energy demand:

75,00 kWh/m²yr

Energy savings:

46,9 %

Investment:

n/a

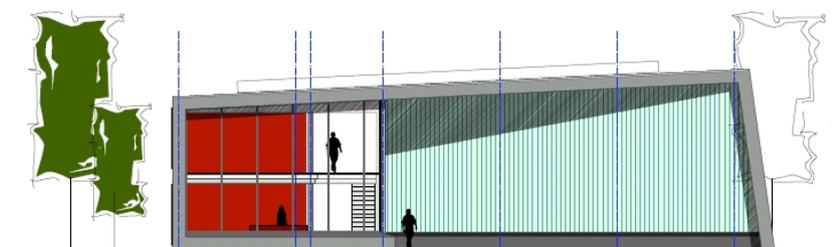
Annual savings:

n/a

Gewerbebau – Büro und Lagerstätten in Münster

Amelunxenstr. 48167 Münster, Germany

The main technical characteristics of this building are: heating is produced by an electric heat pump; a heat recovery system for ventilation is provided (efficiency 75%); the ventilation system is provided with heat recovery (75% efficiency); envelope U value is 0.38 W/m²/K; all glass surface are triple glazed unit; a geothermal system is installed (45 kW); elimination of all thermal break; activation of week-end drawdown; installation of thermostatic valves.





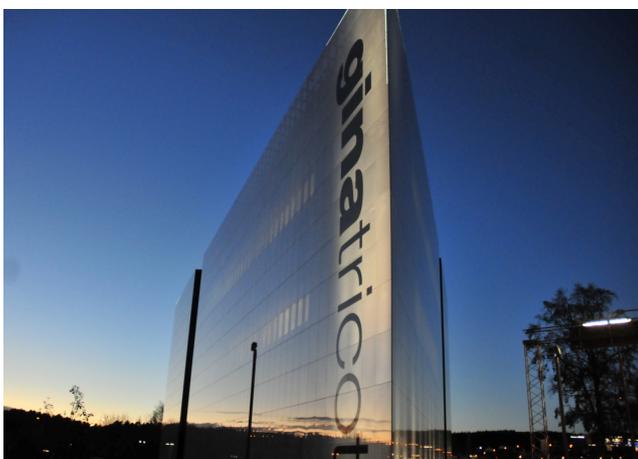
Horngäddan 11

Borås, Sweden

Gina Tricot AB is one of Scandinavia's now quickest growing fashion chains. The estate is a new building, built during 2009 and 2010 to become the main office of Gina Tricot.

The level of demand on this type of building is estimated to be 119 kWh/m² year. The building is designed to use less energy, and the estimated energy use for this building is 79 kWh/m² year . This gives a 33,6% reduction of the use of energy versus law requirements.

The overall energy and environmental goal for the building is to adjust the energy system, and if necessary, take actions to keep the already low energy use, and if possible even improve it every year.



Registered in 2010

New Building

Type of building:

Office

Area:

n/a

Reference value:

119,00 kWh/m²yr

Primary energy demand:

79,00 kWh/m²yr

Energy savings:

33,6%

Investment:

n/a

Annual savings:

n/a



Registered in 2011

Refurbishment

Type of building

Office

Area

n/a

Electricity saving

5.8 MKWH (-37%)

Gas savings

4.5 MKWH (-37%)

Energy savings

37%

Headquarter Marly Le Roi

Marly Le Roi, France

In the refurbishment of this building the following actions have been implemented:

- Change of the four gas-fired boilers with low-energy boilers
- Renovation/ implementation lagging power plants and air handling cuts
- Installation of 6.000 m² of thermal film on 2.200 windows of the Site
- Installation of detectors in the meeting rooms and photocopying rooms for heating, cooling and lighting
- Replacement of 1.200 old luminaries with low-energy lighting with movement detectors and light implementation of 1.900 LED
- Cutting hot water tanks from May to October
- "Climate Change" objectives (-20% between 2006/2010 and -45% between 2006/2015): Electricity savings: 5.8 MKWH or 493 tonnes of Co₂ saved; Gas savings 4,5 MKWH or 826 tonnes of Co₂ saved.

2011 targets: Installation of a solar panel for hot water





Neubau Niederlassung Balingen

The project is a new building constructed between 2005 and 2010.

The construction is a one-store office building as a branch office of the company with a capacity of about 7-8 workplaces. The floor slab and the walls have been designed as timber frame construction and the roof as a nail-laminated board stacks construction. The insulation as well as the windows is designed according a very high standard. The envelope U value ($W/m^2/k$) is 0.20.

The heating system is operating with a heat pump and the ventilation system is equipped with energy recovery. In addition on the flat roof a photovoltaic roof system is installed with an overall performance of 19.3 kWh. Due to the sustainable design, architecture and installed technologies a low-energy house is achieved, having also low operation costs and CO₂ saving emission.



Registered in 2011

New Building

Type of building:

Office

Area:

196 m²

Energy savings:

90%

Investment:

n/a

Annual savings:

n/a

Award 2011



Registered in 2010

New Building

Type of building:

Industrial/agrarian

Area:

16.700 m²

Reference value:

188,65 kWh/m²yr

Primary energy demand:

110,83 kWh/m²yr

Energy savings:

41 %

Investment:

n/a

Annual savings:

n/a

HaLog Logistik Center Duisburg

Baden-Baden, Germany

The HaLog logistic center was built in 2004. In 2008/2009 a new logistic building, with a net floor area of 7.200 m² was added to the previous one. The all area in now of 16.700 m². The new building is constructed by a pre-fabricated reinforced concrete, cellular concrete and with aluminum/insulation sandwich panels. The envelope U-value amounts to 0,52 (W/m²/K).

The building is supplied by a Tri/Cogeneration plant.





Handelshof Leipzig

Salzgässchen 6, 4109 Leipzig, Germany

This project is a refurbishment intervention. It started in 2008 and will be completed in 2011. The building was constructed in 1907 in the downtown area of Leipzig as a building for the trade fair. It extends over an area of 84 meters in length and 54 meters in width. It is 8 stories tall and was used as a general purpose building, e.g. for restaurants, offices, stores, museum etc. With the sale of the building from Leipziger messe GmbH to Handelshof GmbH in 2005, a new pattern of utilization as a 5-star hotel was concluded. Retail offices and restaurants are accommodated again as well. For this reason, the building has to be reconstructed. Critical components are to be renewed; energy efficient systems shall replace old conventional system. The target of the reconstruction is the creation of a historical, but in the meanwhile energy efficient building.

The building is used 365 days/year, 14 hours/day. The envelope U value ($W/m^2/k$) is 0,86.

The building is supplied by district heating and centralized mechanical cooling plant with air-air heat pump.

The energy used decreased from 10.905.906 kWh/year to 5.684.293 kWh/year, which gives an energy reduction of 47,9%.



Registered in 2011

Refurbishment

Type of building:

Hotel

Area:

19.987 m²

Before refurbishment:

545,65 kWh/m²yr

Primary energy demand:

284,39 kWh/m²yr

Energy savings:

47,9%

Investment:

n/a

Annual savings:

n/a

Hantverks – och Industrihus i Göteborg AB

Registered in 2011

New Building

Type of building:

Educational

Area:

3.609 m²

Reference value:

145,33 kWh/m²yr

Primary energy demand:

74,75 kWh/m²yr

Energy savings:

44,3 %

Investment:

n/a

Annual savings:

n/a

Idrottshögskolan

Gothenburg, Sweden

The building is a new construction for Gothenburg University for the education of students in the field of sports. The building has three floor levels and comprises a large center hall (three floors high) where sports practices will take place. Around this center hall there are offices and lecture rooms, as well as changing rooms and showers.

Heating, hot water and cooling are provided by a geothermal heat pump. The roof is grass covered. Two ventilation system are installed both with recycling of heat.

The windows have been mounted with solar film to reduce the need for summer cooling.



Siemens Logistikpark

(Zum Roetpfehl, 14974 Ludwigsfelde)

Hockenheim, Germany

The building is used 356 days/year, 24 hours/day. It is a concrete frame construction, with concrete floor slab, lightweight external walls, and steel panel construction with optimized thermal separation to reduce thermal bridging. The envelope U-value is 1,75 W/m²/K.

The building is supplied by district cooling and equipped with a centralized mechanical cooling plant.



Registered in 2010

New Building

Type of building:

Industrial

Area:

25.761 m²

Reference value:

155,41 kWh/m²yr

Heat energy demand:

111,59 kWh/m²yr

Energy savings:

28,2%

Investment:

n/a

Annual savings:

n/a

Registered in 2011

New Building

Type of building:

Office

Area:

868 m²

Reference value:

174,19 kWh/m²yr

Primary energy demand:

127,13 kWh/m²yr

Energy savings:

27%

Investment:

65.000 euro

Annual savings:

n/a

H.H. Holding Bönen

Bönen, Germany

This new office building has 3 floors. The area is of 868 m². It is used 300 days/year and 11 hours/day.

The heating is produced by an electrical heat pump. Cooling is produced by an air-water heat pump. The ventilation system is provided of a heat recovery system with an efficiency of 88.0%. For sanitary hot water a combined gas oil boiler is used.

Different control system has been installed: the heating and the cooling automatically stops when windows are open. A night draw down system is operative.

The management have the possibility to compare the actual consumption with the theoretical consumption.



Bureau Belvedere

Wien, Austria

This intervention is a refurbishment of an office building built in 1960. The area of the building amounts to 11.532 m² and has 9 floors. It is supplied by district heating; cooling is supplied by cooling ceiling. For the lighting system the building is equipped with fluorescent lamps (80%) and compact fluorescent lamps (20%). Ventilation has heat recovery using circulating heat exchanger.

Before renovation the annual heating demand was 32,84 kWh/m³year, and the annual cooling demand was 0,68 kWh/m³ year. After the intervention the value decreased to: 8,10 kWh/m³ for heating and 0.33 kWh/m³ for cooling.

The annual heating demand is 75,33% lower than before refurbishment and the annual cooling demand is 51,47% lower.



Registered in 2011

Refurbishment

Type of building:

Office

Area:

11.532 m²

Reference value:

101,89 kWh/m²yr

Primary energy demand:

25,62 kWh/m²yr

Energy savings:

74,8

Award 2012



Registered in 2007

New Building

Type of building:

Office

Area:

16.657 m²

Energy savings for heating:

26%

Energy saving for cooling:

58%

Investment:

n/a

Annual savings:

n/a

Forum Schönbrunn, BT2 - Büro

Wien, Austria

The seven floors office building has a clear, modern and multifunctional interior. Commercial companies will find a wide spectrum of possible office usages, ranging from attractive cell office to flexible and open-plane offices. Ecological and environmentally friendly construction materials are used in accordance with Austrian building assessment system: "klima aktiv". The air-handling system and cooling ceiling installed will provide a pleasant indoor climate. Ribbon glazing forms the major part of the building exterior besides a highly efficient glass façade.

The building is supplied by district heating. Cooling is supplied through cooling ceiling (suspended metal ceiling), radiation is controlled by external shading devices. All office and conference rooms are equipped with presence and daylight control.

The annual heating demand amounts to 6,34 kWh/m³ a and the annual cooling demand amounts to 0,42 kWh/m³.



Kabeg

Landeskrankenanstalten

Betriebsgesellschaft



CMZ –Klinikum-Klagenfurt

Klagenfurt avvm Wörthensee, Austria.

This new building is a modern, 5 floors, healthcare center with a wide range of services. The new building does not only improve the processes, but also provides the patients, the employees and the visitors a convenient atmosphere.

The main measures taken for energy efficiency are the followings:

Optimization of the U value of the envelope: roof: 0.17 W/m² K; exteriors walls 0.2 W/m²K; windows: 1.1 W/m²K.

The building is supplied with district heating. Ventilation is equipped with heat recovery. For cooling the buildings is equipped with external shadings (apart from north façade) controlled by the central system (depending on solar radiation). For lighting energy-efficient lamps with electronic ballast are installed.

Annual heating demand is 29.7% of the legal reference value and cooling demand is 41% less than the value.



Registered in 2011

New Building

Type of building:

Healthcare

Area:

58.440 m²

Reference value:

43,6 kWh/m²yr

Primary energy demand:

30,18 kWh/m²yr

Energy savings:

30,90

Investment:

n/a

Annual savings:

n/a



Kärnfastigheter



Registered 2010

Refurbishment

Type of building:

Educational

Area:

8.570 m²

Before refurbishment:

179,00 kWh/m²yr

Primary energy demand:

122,00 kWh/m²yr

Energy savings:

32%

Investment:

n/a

Annual savings:

n/a

Elinebergsskolan

Helsingborg, Sweden

This school building provides teaching for pupils from preschool up to grade 9. The building has a total area of about 8.570 m². It is heated with a water carried radiator-convector system, equipped with thermostatic valves and connected to district heating. In 2007 upgrading of the control and supervisor system was started. This was followed by extensive improvements of the ventilation system carried out between 2008-2009. New air handling units with a recycling efficiency of about 80% and efficient electric motors were installed. The electricity consumption decreased by about 70MWh/year after installing more efficient lighting. The new air handling units reduced the annual energy consumption by 17 MWh/year of electricity and 467 MWh of gas heating.





Gamlestaden 2:8

Malmö, Sweden

This premise was built in 1966 and contains fifteen floors.

Is approximately 20.000 m² and is mainly occupied by offices.

The following measures are planned to reach the company's energy targets:

Older double glazed windows are to be replaced by modern windows with a U value of 1.0 W/m² K.

With new windows and a replaced façade the heating system will not be required during the winter months.

To make further savings the ventilation system will be seasonally adjusted. Additional energy savings can be realized by heat extraction from the ventilation system. The 82.000 m³/h throughput can be exploited to 80%. All these measures will generate a saving of 66%.



Registered in 2001

Refurbishment

Type of building:

Office

Area:

20.000 m²

Before refurbishment:

156,2 kWh/m²yr

Primary energy demand:

53,7 kWh/m²yr

Energy savings:

66%

Investment:

n/a

Annual savings:

n/a

Registered in 2010

Refurbishment

Type of building:

Commercial

Area:

38.200 m²

Before refurbishment:

123,00 kWh/m²yr

Primary energy demand:

92,00 kWh/m²yr

Energy savings:

25,1%

Investment:

n/a

Annual savings:

n/a

Bäckebol Homecenter, Huvudbyggnaden

Gothenburg, Sweden

KF Fastigheter manages and develops a geographically strategic portfolio of retail property.

This building houses about 17 different commercial tenants.

The building's heating takes places mainly through the pre-heated supply air. In summer the inside temperature is kept at a comfortable level using cooled supply air.

Since 2006, an intense energy optimization work has been done which resulted in the building's total energy use which decreased from 123 kWh/m² year to only 92 kWh/m² year.

Other measures are foreseen to be implemented as the installation of heat pump for heat recovery of waste from Coop Forum's food cooling and switching to energy efficient light bulb in the mall.



Rösunda 5:2 Saltsjöbaden, Sweden

This project concerns Vår Gård, a conference center that contains hotel, conference and restaurants activities. The conference is located in Saltsjöbaden, just outside Stockholm.

Special attention has been given to the technical plants. A new geothermal heat pump system was installed in 2006. An oil burner running on rape seed oil was installed in 2009.

A new heat exchanger has been added to the heating system to facilitate outdoor compensation/regulation.

The hot water production system was completely renovated. Existing heating culverts were replaced and new pipe work for hot water – and its circulation - and cooling circuits was installed.



Registered in 2010

Refurbishment

Type of building:

Hotels & restaurants

Area:

n/a

Before refurbishment:

200,00 kWh/m²yr

Primary energy demand:

60,00 kWh/m²yr

Energy savings:

70%

Investment:

n/a

Annual savings:

n/a

Award 2011





Registered in 2010

New Building

Type of building:

Commercial

Area:

581 m²

Reference value:

198, 54 kWh/m²yr

Primary energy demand:

142, 85 kWh/m²yr

Energy savings:

28%

Investment:

n/a

Annual savings:

n/a

KIK Altentreptow

Fritz Reuter Strasse 17, 17087 Altentreptow, Germany

KIK is selling textiles in this store. With the use of efficient ventilation, heating and cooling system, in conjunction with an optimized shell, the building achieved a correct ratio between costs and efficiency.

The envelope U value is 0.545 W/m² K.

The heat is produced by an electric heat pump. Cooling is produced by an air-water heat pump. Ventilation is provided with heat recovery (80% efficiency).

The total primary energy used amounts to 82.998 kWh/year.





Berlin Marzahn

Prötzeler Ring 8, 12685, Germany

KIK is selling textiles in this store. With the use of efficient ventilation, heating and cooling system in conjunction with an optimized shell the building achieved a correct ratio between costs and efficiency.

The envelope U value is $0.457 \text{ W/m}^2 \text{ K}$.

The heat is produced by an electric heat pump. Cooling is produced by an air-water heat pump. Ventilation is provided with heat recovery (80% efficiency).

The total primary energy used amounts to 95.939 kWh/year .



Registered in 2010

New Building

Type of building:

Commercial

Area:

645.2 m^2

Reference value:

$237,49 \text{ kWh/m}^2\text{yr}$

Primary energy demand:

$148,6 \text{ kWh/m}^2\text{yr}$

Energy savings:

37,4%

Investment:

n/a

Annual savings:

n/a



Registered in 2010

New Building

Type of building:

Commercial

Area:

556 m²

Reference value:

262,05 kWh/m²yr

Primary energy demand:

143,61 kWh/m²yr

Energy savings:

45,2%

Investment:

n/a

Annual savings:

n/a

Ensenfeld FM 01

Bahnhofstrasse 39, 63820 Elsenfeld, Germany

KIK is selling textiles in this store. With the use of an efficient airing, heating and cooling system in conjunction with an optimized shell the building achieved a correct ratio between costs and efficiency.

The envelope U value is 0.483 W/m² K.

The heat is produced by an electric heat pump. Cooling is produced by an air-water heat pump. Ventilation is provided with heat recovery (80% efficiency).

The total primary energy used amounts to 79.850 kWh/m²/year.





Harsefeld

Friedrich Huth Strasse 19, 21698 Harsefeld, Germany

KIK is selling textiles in this store. With the use of efficient ventilation, heating and cooling system in conjunction with an optimized shell the building achieved a correct ratio between costs and efficiency.

The envelope U value is 1.37 W/m² K.

The heat is produced by an electric heat pump. Cooling is produced by an air-water heat pump. Ventilation is provided with heat recovery (80% efficiency).

The total primary energy used amounts to 80.764 kWh/year.



Registered in 2001

New Building

Type of building:

Commercial

Area:

600 m²

Reference value:

188,4 kWh/m²yr

Primary energy demand:

134,60 kWh/m²yr

Energy savings:

28,6%

Investment:

n/a

Annual savings:

n/a