

Utrecht, January 2009

Rabobank's new head office will be characterised by transparency

Utrecht's skyline will be enhanced by the construction of a new administration centre for Rabobank Nederland. The high-rise building comprises two towers that stand at a slight angle to each other and are connected by a double-skin facade made entirely of glass. The centre, 105 metres tall, complements its surroundings well. 'Transparency' is the word that correctly typifies both the building and the technology within. SAUTER is the supplier of this energy-efficient building management system.

The maximum height of the towers is determined by Utrecht's cathedral which, with a height of 112 metres, will continue to dominate the cityscape, since Rabobank's new building will respectfully remain below this limit. The two towers are joined to each other on each floor. Out of each five floors, four floors skip inside, whereby atriums are formed. In these atriums trees will be planted. The inner gardens, which contribute to the climate control of the building, will be sprinkled with captured rainwater.

The double glass skin that shrouds the towers has a glass surface of 20,000 square metres. With a gross floor space of 50,000 square metres for the towers and 6,000 square metres for the accompanying plaza, the total surface of the Rabobank Campus amounts to 120,000 square metres. The 25-floor towers and the accompanying plaza form the heart of the Rabobank Campus. The building won a prize even before construction had begun: the FD Property NL Real Estate Award.

'Rabobank Unplugged': New approaches to work

After completion, the Rabobank Campus will provide space for approximately 6,500 employees. Rabobank Nederland chose the concept 'Rabo Unplugged', which is intended to reflect the company's no-nonsense methods. The concept is implemented under the responsibility of Veldhoen + Company. Typical of 'Rabo Unplugged' is the flexible approach towards the assignment of work spaces: nobody has a set work space. At Interpolis, an insurance firm and Rabobank subsidiary in the past, a similar model was applied at the head office in Tilburg and in several branches. Thus, Interpolis has grown into the prime example of a 'new way of working'.

For Rabobank Nederland, the new building of the administrative centre is the moment to introduce a new style of working. Attendance time is not important, what counts are the results gained. This means that the work process takes place not only on the 'shop floor', but also away from it: at home or on the road.

This approach has far-reaching consequences for the building and its exploitation. Because of the flexible working practices, 40% of space is saved and the available facilities of the building are used much more efficiently.

Sustainable demolition and sustainable building

An old building belonging to Rabobank was situated on the site until recently. The care that Rabobank Nederland has for the environment was also expressed in the sustainable demolition of this building: 98% of the demolished material was recycled. One hundred tons of glass were remelted and recycled, system walls and security ports were used for another Rabobank building and the enormous water pump will start a new life in a technical school in Malawi.

For the new buildings, sustainability and energy use are important aspects, also with regard to the applied materials and installations. Because of efficient use of energy, the Energy Performance Coefficient is as much as 35% lower

than what is currently prescribed by the Dutch government. When choosing from the various subcontractors and suppliers, the sustainability aspect was an undeniable factor. "That Sauter produces all its products according to the RoHS (Restriction of Hazardous Substances) standard, was one of the positive points", according to Mr De Vries, responsible at Rabobank Nederland for the technical completion of the building. The sustainability of the building is calculated according to the GreenCalc score, which covers aspects relating, for example, to the building itself (such as the application of energy, water and use of material) and to its usage (such as the choice for different working hours). The building already scores over 300 points, making it one of the most sustainable buildings in the Netherlands.

Transparent technology

'Transparent' is the word that correctly typifies both the building and the technology within. The transparency is expressed in the clear, uncomplicated set-up of the installations, in order to make adequate management and maintenance possible. Valstar-Simonis, the technical consultants, have ensured low energy consumption and a flexible set-up of the installations in the advanced design.

The two towers are ventilated by two air handling units, to which smaller AHUs have been added for specific rooms. The installations obtain their heat and cooling from the aquifers (cold and heat storage in the ground), in combination with heat pumps. If needed, the installations can be supplied with additional heat from the district heating network in the winter. Any excess heat or cold from the heat pumps is stored in the five dual aquifers for later use. Within the buildings, a distinction is made between comfort cooling and process cooling. The latter refers to the cooling of the main and auxiliary computer rooms. For process cooling, chillers are used which have condensers that aid cold storage.

The almost 2,500 individual control devices in the building control the air-conditioning system, the window blinds integrated in the facade, and the lighting. All this requires specialist installation that will be carried out by the joint operations of Wolter&Dros, BAM Techniek and Croon in about two and a half years.

The transparency of the building has also been continued in the way that the building's installations are networked with each other. In the design, it was decided to have all installations communicate via BACnet/IP. "By applying BACnet/IP, we are assured of an open protocol with a highly potential future perspective", says Gerrit de Vries. "We have specifically chosen BACnet over IP because of its openness and the great possibilities that this offers in terms of infrastructural facilities." For example the air-conditioning system, the emergency power aggregates, the transport installations (elevators, escalators and such) and the over 100 frequency regulators communicate via BACnet/IP and SAUTER novaPro Open (B-OWS), Sauter's BACnet building management system.

The heat pumps, the car-park ventilation system and the chillers are not yet able to communicate via BACnet/IP. They have been connected via the Modbus RTU protocol on a SAUTER EY-modulo 5 controller to novaPro Open; this also applies to the energy meters that are connected by means of the M-bus protocol. The complete Security Management System (SMS), consisting of access control, CCTV, burglar alarm system, evacuation, fire alarm system and sprinkler system, also communicates via BACnet/IP with the novaPro Open building management system.

SAUTER's new EY-modulo 5 series, with communication via BACnet/IP, is being employed for the building automation of the installations. This new modular solution kit fits in well with Rabobank's flexible concept and offers the possibility of stepwise and individual extension.

Within BACnet's various work groups, hard work is being carried out to define new objects and to create new services. Because the control systems for the HVAC installations at Rabobank can be provided with various new BACnet objects and services, it is guaranteed that the installations will remain up to date. Many recent developments within BACnet, such as the structured view object (SV) and web services (BACnet/WS), have already been incorporated into the new SAUTER EY-modulo 5 series. Both examples clearly indicate that transparency and openness are of paramount importance to both Rabobank and Sauter.

"The choice of BACnet/IP was a very conscious one made by Rabobank", says Mr De Vries. "Where BACnet was originally a communication medium for exchanging data, it is now clearly developing into a communication platform for integral installation technology. We are convinced that BACnet/IP is a future-orientated platform – and that matches the aims of our organisation very well."



Wietse Hut
Manager Sales SAUTER Nederland
wietse.hut@nl.sauter-bc.com
www.sauter-controls.nl

Facts & Figures on the building management solution

20 motor control panels for primary automation
90 motor control panels for decentralised functions
2,500 room controllers
> 4,000 sunshade motors
> 6,000 light fittings
> 50,000 data points on the building management system

About Rabobank

Rabobank is one of the largest financial service providers in the Netherlands, founded at the end of the 19th century as a co-operative bank. This co-operative character has been a typical feature of the bank right through to the present day. Rabobank is represented in 43 countries and employs 60,000 people. The bank currently has 'Triple A' status, the highest status of financial affluence. Respect, integrity, professionalism and sustainability are the core values of the bank.

www.rabobank.nl

About SAUTER Group

- A medium-sized, family-owned company headquartered in Basle, Switzerland
- Established in 1910, building on almost 100 years of tradition and experience
- Employs a workforce of about 1,900 in 18 subsidiary companies. Present in 30 countries throughout the world and following a course of sustained expansion.
- Complete building management solutions from one single source. Focus: maximum energy efficiency to give customers measurable added value, and to play an active part in protecting the environment. Safeguarding investments and ensuring reliable operation throughout a building's life-cycle.
- One of the technology leaders in the building automation and system integration sector
- Member of eu.bac

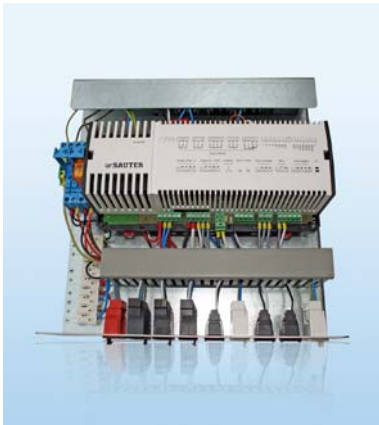
More SAUTER reference projects: Berlin Main Rail Station; Allianz Arena, Munich; Royal Opera, London; Power Tower, Linz

You will find a selection of worldwide references at www.sauter-controls.com, under 'Energy-Efficient Environments'.

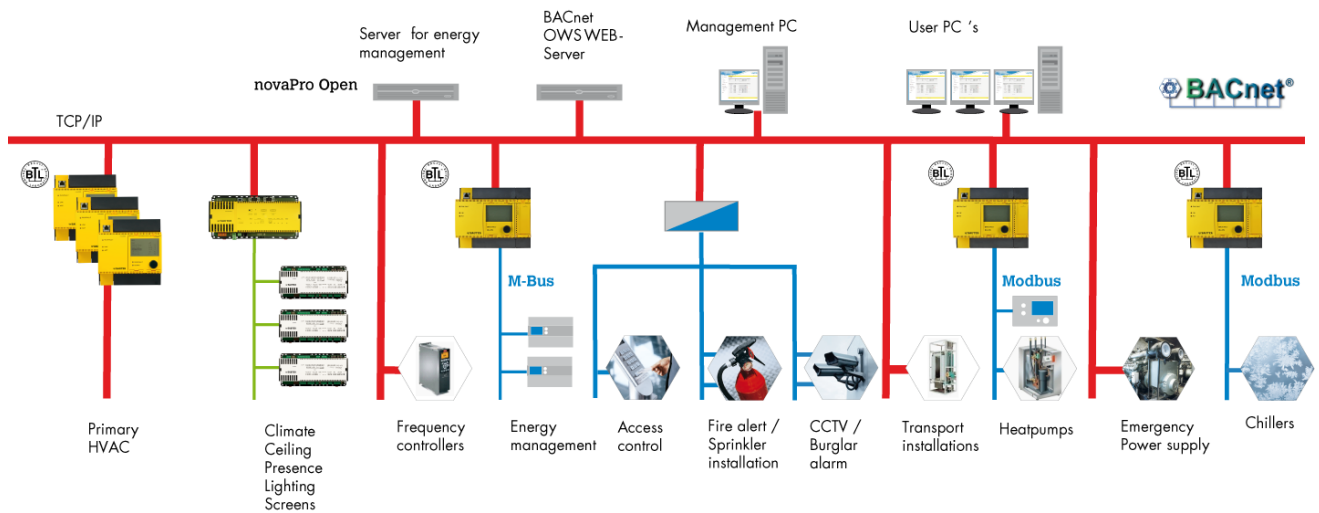
Pictures for the article:



SAUTER is carrying out the biggest BACnet Project in the Netherlands – the Headoffice of the Rabobank Utrecht.



SAUTER room automation: a control system for temperature, lighting and window blinds



Building automation topology example from Rabobank.