



# Sana-Klinikum Remscheid

## Energy Efficiency in Buildings

- Emphasis on hospital with 750 beds
- New construction & refurbishing incl. financing
- Maintenance over 15 year
- Planning and project implementation 4 years



# Energy Efficiency in Buildings

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### Situation

The Sana Clinic Company: Established in 1976 by 18 private German health insurers. Today, the Sana Group consists of 12 regional companies and a corporate headquarters in Munich (2004). Sana has some 93 facilities with 17,400 beds. The Sana associations' 23,530 employees had sales of EUR 1,240 million in 2003.

### Project procedure

Ultimately, the sum total for investment, energy and media costs as well as operations are the decisive factors. Optimizing all three types of costs is the only way to produce positive long-term results. The contractor is a consortium of companies including Siemens Building Technologies and GegenbauerBosse Krankenhaus Service LLC. The project phases:

- Draft an energy and operation optimization concept for building control technology including implementation plans.
- Set up and optimize the building control technology.
- Operate and maintain the building control technology with a 15-year warranty period.

### Energy relevant measures

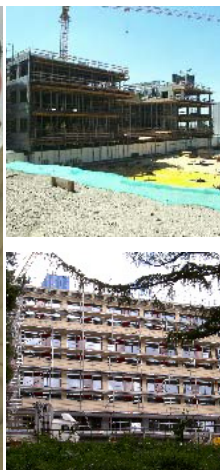
- Heat supply plant
- Air treatment systems
- Building automation and control with building control technology
- Plumbing technology and sprinkler systems
- Fire detection plant
- Access control system and video technology
- Phone system
- Medium voltage system
- Low voltage system
- Lighting system

### Project data

- Emphasis on hospital with 750 beds (41'000 patients p.a.).
- Construction measures without medical technology: € 70 Mio.
- Maximum energy costs: € 1 Mio. p.a.
- Maximum operating costs: € 1.1 Mio. p.a.
- Investment: € 26.4 Mio.
- Contract period: 15 years

### Customer benefits

- Stay within the upper investment level.
- Maintain annual energy and operating costs for defined user conditions.
- Pre-finance the building control technology by the contractor.
- Reduce construction time, lower risk: just 1 responsible party.
- Higher plant availability, secured value, increased profitability thanks to energy controlling, monitoring and service.
- Contribute to protecting the environment through lower emission levels.



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