



From heating to cooling with DesiCool

Ragn-Sells, Sweden



Högbytorp is one of Ragn-Sell's plants and Sweden's leading recycling facility. Every day, Högbytorp receives around 2,000 tonnes of waste material. Here it is sorted, treated and cleaned. An increasingly small proportion is deposited in landfills, and much of it goes back into the ecocycle in the form of fuel or new products. As the demand for heating in Bro is lower in the summer, Högbytorp has a surplus of landfill gas between May and October, a surplus that was previously transported away. One man recognised the potential in this, and contacted Munters with an idea.

Recycling surplus heat

While there was also a large surplus of landfill gas, Högbytorp's existing office with 14 rooms was scheduled to be expanded by an additional 30 rooms, along with a larger dining room and changing room. The new Högbytorp premises would have room for around 80-100 employees. Before renovation, the office only had a small cooling plant and electric heating. Then the company had the idea of using its landfill gas for heating the office during the winter. Högbytorp's property manager, Örjan Ahlström, was therefore looking for a cooling solution to make use of the company's surplus gas.

Örjan heard about the environmental and technical benefits of Munters' DesiCool. Högbytorp had previously used traditional air conditioning with refrigerants, but, for environmental reasons, wanted to avoid this in the new office building.

Quick facts:

- Prevents ice and frost buildup
- Reduces time-consuming defrosting
- Saves energy and reduces maintenance
- Reduces number of damaged products
- Better working environment and reduced risk of occupational injuries



Munters DesiCool system.



A successful idea

DesiCool is a complete climate management system with sorption cooling. Although the system does not contain any compressors or refrigerants, its capacity is equivalent to a freon-based system. The outdoor temperature can be cooled from 30°C to 15°C, and, in order for the cooling process to work during the summer months, heat is required. The more heat is added, the colder it gets. DesiCool uses heat, not electricity, for cooling. In most cases, no post-heating is required in the winter, as the heat recovery rate is extremely high. These two features mean low operating costs. In addition, the unit can be serviced by the company's own maintenance department as mandatory inspection of the refrigeration plant is no longer required. If there is surplus heat in the summer, it can be used for cooling.

Ragn-Sells decided to install a DesiCool system from Munters, with an airflow of 4.8 m³/s. The DesiCool condensing unit now creates a cool supply air during the summer months by using surplus heat that was previously transported away. Ahlström says he is convinced that the operating cost is lower than it would have been with a conventional system.

Ragn-Sells is one of Sweden's largest environmental and recycling companies, and a market leader in a number of segments. The company processes and recycles waste products and waste from municipalities, industries and households at a large number of recycling plants. It takes care of hazardous waste, and conducts environmental reviews and life cycle analyses. Ragn-Sells also sells and supplies recycled waste products.

Want to know more about Munters' climate solutions for your company? Please visit our website, www.munters.se, where we can guide you further.

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