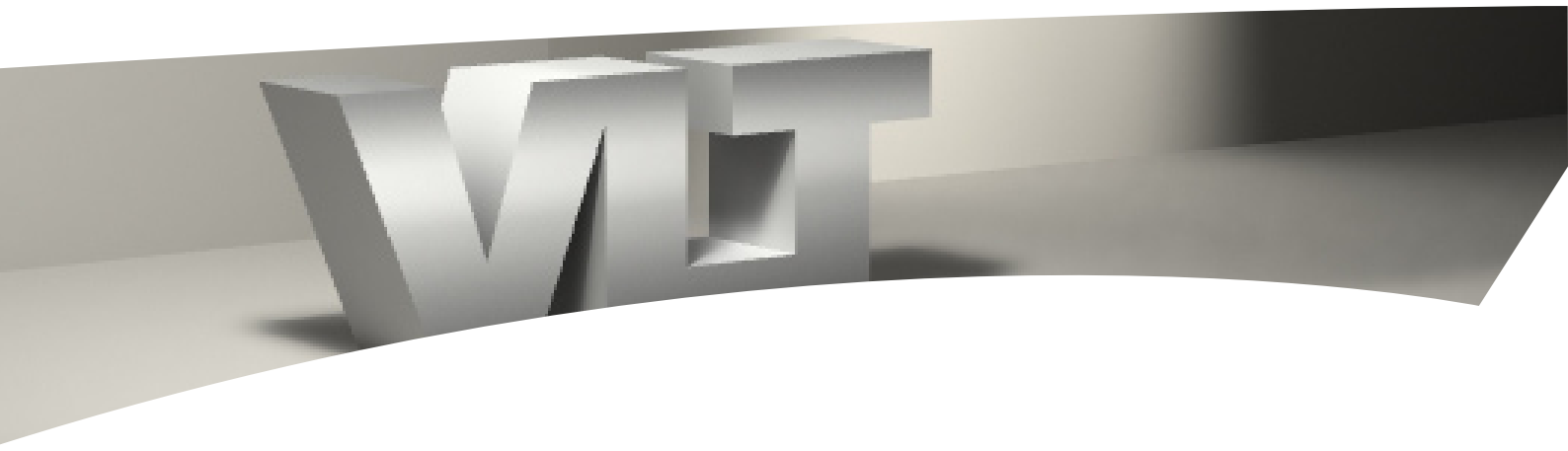
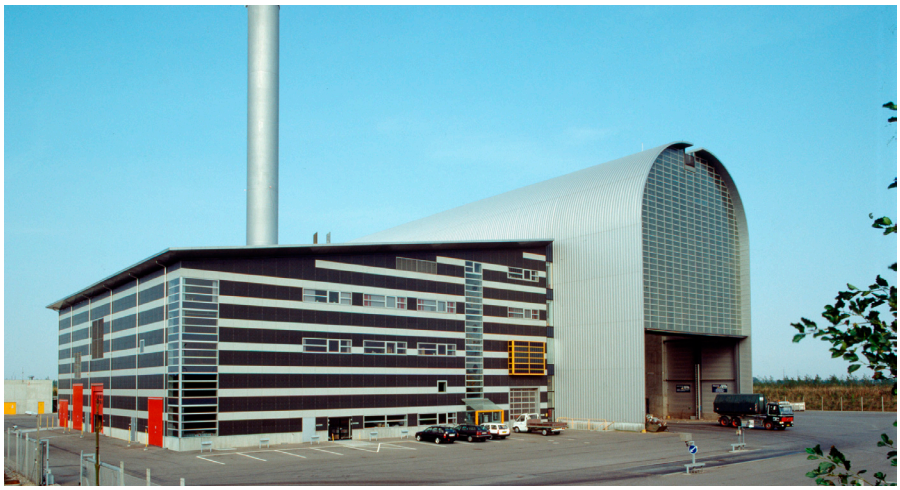


Increased confidence with High-Power VLT® Drives

Sonderborg Heat Company, the municipal heat and power utility in Sonderborg, Denmark, generates heat and electric power for the town of Sonderborg.



They installed drives on the 355 kW main water feed pump and a 450 kW twin-piston compressor in 1993. The main water feed pump feeds water into the entire plant. The twin-piston compressor compresses natural gas from the supply line to a higher pressure required by the gas turbine which operates the electric power generator. In addition, the plant burns waste from the community to generate heat.

The customer had prior experience with Danfoss VLT® drives on smaller loads and was pleased with Danfoss' products and services; however Danfoss did not have frequency converters large enough for these applications in 1993. As a result the frequency converters were supplied by another manufacturer.

Over the years, the customer had poor experience with the reliability of the drives and the service from the other supplier. Although the supplier was a global company they did not have locally available service. As a result the response time for service issues was long and the spare parts were expensive and difficult to obtain.

Sonderborg Heat decided to replace the aging drives in 2006. In addition to replacing the drive on the water feed pump they also specified a backup drive and a transfer switch to switch between the primary drive and the backup drive.

Smaller and more reliable

Sonderborg Heat requested proposals from three major drives suppliers including Danfoss. Danfoss, who now offers high-power drives, collaborated with Automatik Syd, a nearby panel builder, to offer the complete solution including Danfoss VLT® drives and switchgear. Danfoss sales personnel were able to select VLT® drives that were optimal for the application, and what's more, the proposed VLT® drives were rated smaller than the old drives. Danfoss and Automatik Syd were able to offer a solution that was smaller and more reliable than the previous system.

Sonderborg Heat was looking for three features: small size, reliability and service. The Danfoss solution which included the primary drive, the backup drive and transfer switch was smaller than the existing frequency converter and soft starter. The customer, having prior experience with

other Danfoss VLT® drives knew of their high reliability. In addition, they knew that Danfoss provides service that is unsurpassed in the industry. As a result, Sonderborg Heat selected the solution offered by Danfoss and Automatic South.

Results

During the installation and startup of the VLT® drives Automatic South provided the system expertise and Danfoss provided the drives expertise, as a result the VLT® drives and switchgear were installed and commissioned within one week, including removal of the old system.

The twin-piston compressor presented some issues shortly after startup. The twin-piston compressor demonstrated system dynamics that were resulting in an over-voltage condition while the compressor was ramping down. This condition occurred about 5% of the times that the compressor was operated. Although problems that occur infrequently are normally difficult to troubleshoot, Danfoss Application Engineers used their technical expertise to quickly troubleshoot the problem and resolve the issue. The Application Engineers used the advanced control features of the drive by adjusting a few parameters within the controls, preventing the over-voltage condition from re-occurring.

Due to the critical nature of the application Sonderborg Heat Company also selected a Danfoss DrivePro™ service agreement to ensure long-term care-free operation of the system.