



BRAMMING FJERNVAERME

Developer: Bramming Fjernvaerme

Location: Bramming, Denmark

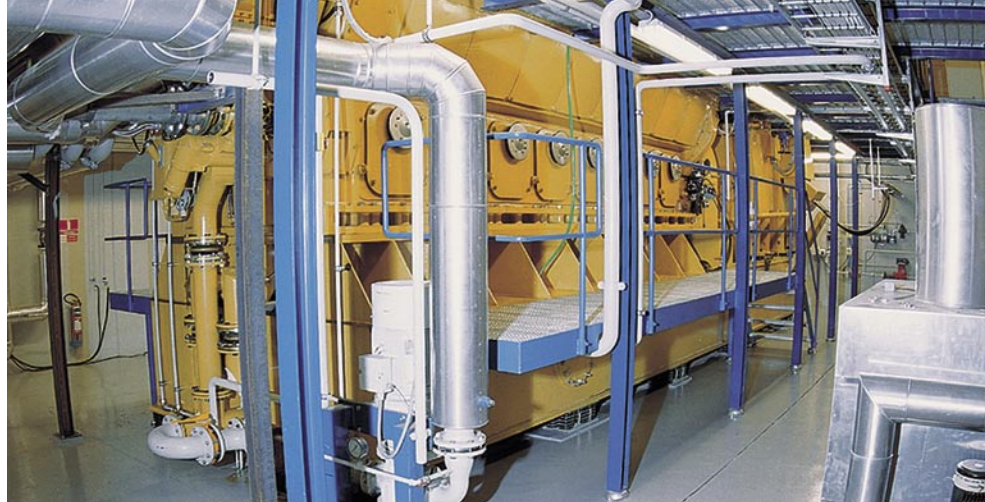
Installed: February 2001

Over the years, Bramming's growth resulted in increased demand for heat, and Bramming turned to Caterpillar to deliver a power solution. The town was looking to upgrade the existing plant in an economic manner, and selected the Cat® G16CM34 natural gas engine due to its high output (6.1 MW at 750 rpm), and electrical efficiency of 43.4%.

The G16CM34 is the largest of the Caterpillar family of natural gas engines. It is manufactured by Caterpillar Motoren GmbH & Co. KG, in Kiel, Germany and is the result of a joint development effort with the Caterpillar Large Engine Center in Lafayette, Indiana, U.S.A.

Caterpillar engineering services provided basic specifications for the project. Tjaereborg Industri, a Danish company dealing mainly within the district heating business covering engineering, production, contracting and operation, provided a comprehensive heat recovery solution, producing 6,766 kW of heat.

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With just one engine, the high output of the Cat® G16CM34 accomplished Bramming's goals of fulfilling its current heating needs and providing extra capacity for future growth. This allowed Bramming to modify the existing plant without incurring significant cost.

Power plant operation was completely modified, yielding an additional heat and storage tank, which served to increase the heat capacity of the entire plant. Overall plant efficiency exceeded 92%, putting it on the top of the efficiency list for Danish district heating power plants.

The high total plant efficiency of 92% enabled Bramming to target the plant to run on weekends for maximum heat storage and keep the G3600 engines in standby mode. Electricity produced by the plant is sold into the Danish national utility grid, helping reduce district heating costs.

Caterpillar Power Generation Systems provides total solutions for your business. We have the equipment, services, knowledge and experience to help meet your 1-100 MW power needs.

For additional information visit our website: www.cat.com/powerplants or email us at: cat-powerplants@cat.com.

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