

FLEXALEN SPECIFIED FOR TALLEST BUILDING IN BENELUX



[Flexalen 600](#)



[Flexalen prefabrications](#)



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PROJECT INTRODUCTION

In collaboration with Thermaflex, BAM Energy Systems implemented an important part of the heating network in De Zalmhaven residential complex, set to become the tallest residential skyscraper in the Benelux region. Using the Thermaflex Flexalen® solution, the project emphasized high and stable performance with ease and speed of installation.

GOALS

- Implement a flexible heating solution.
- Ensure a rapid and efficient deployment of the heating network system.
- Minimize the need for maintenance, with sustainability and long-term operational efficiency.

CHALLENGE

The demand for quick installation, coupled with the need for operational excellence and an extended system lifespan, has emerged as a pivotal consideration in this project. With De Zalmhaven residential complex featuring not only the main skyscraper but also two additional towers (70m), a parking garage, and 33 luxury living spaces, the intricacy of fast installation has heightened. This requested a solution that ensures swift on-site installation and deployment with the lowest possible risk profile.

SOLUTION

To address the challenges of this project, the deployment of Flexalen® 600 pipes and Flexalinks was crucial. These solutions offer a range of benefits:

- The unique design of Flexalen® 600 enables ease and speed of installation even in challenging conditions.
- Flexalinks offers secured entirely homogeneous, and easy-to-weld connections.
- The pipes are lightweight and flexible, making them easy to handle during installation.
- They are also corrosion-free and a circular product. These advantages ensure the network's efficiency throughout its life cycle and contribute to the overall reliability and longevity. The quality of Flexalen® 600 and Flexalinks demonstrates Thermaflex's commitment to delivering solutions that stand out in performance, durability, and ease of installation for various applications.

PROJECT INFORMATION

📍 Rotterdam, The Netherlands

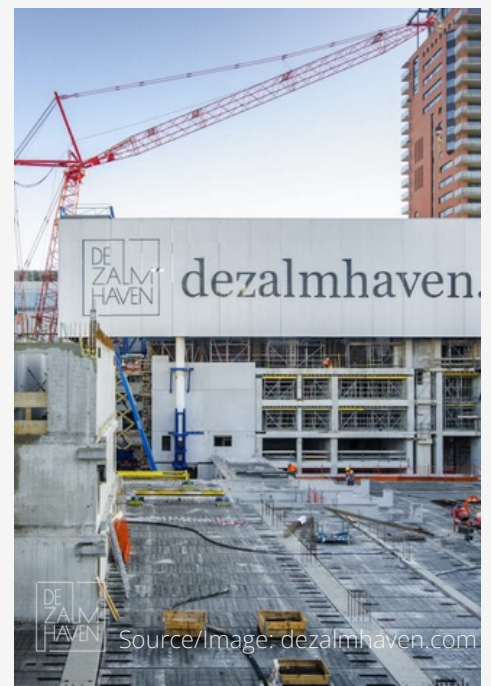
- Customer and Installer: Bam Energy Systems
- Project Responsible at Thermaflex: Andre Rutten
- Year of the project conclusion: 2021

APPLICATIONS

- Heating network

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PROJECT PROCESS

The heating system in this project uses cutting-edge technology. It combines heat pumps and a thermal energy system, with the urban heating network as an additional energy source. The heat and cold storage system (WKO system) is connected to two powerful heat pumps for heating and cooling. For more efficient and sustainable operation, BAM also utilizes the heat recovered from the ventilation extraction in the parking lot. To meet peak energy demand, the company connects the three towers to the Rotterdam urban heating system, providing sustainable heating and cooling for all three towers.

To establish a flexible urban heating network with a long lifespan and quick on-site installation that meets the high standards of this project, Flexalen® 600 pipes and Flexalinks were specifically used. Due to delivery time requirements, all pipes, made of Polybutene-1 (Polybutylene, PB-1), were project-specific prefabrications, including Flexalinks and custom-building entry bends. The combination of specific prefabrications and pipe flexibility allowed for the rapid deployment of the network, ensuring a smooth project execution and highlighting the reliability of the Thermaflex solution.

Additionally, the Flexalen® plastic system is EN 15632 certified, guaranteeing a minimum lifespan of 30 years at temperatures ranging from 80 to 95 degrees. This certification adds an extra layer of reliability and durability to the urban heating network, meeting industry standards for long-term performance.

RESULTS

The successful conclusion of the piping system installation in April 2021 marked a significant achievement, effectively addressing project complexities:

1. Customized Flexalinks and the adaptability of Flexalen® 600 pipes facilitated swift on-site installation, ensuring prompt delivery, and low-risk deployment. This contributed to meeting the project's planned schedule.
- Thermaflex's solution guarantees adaptability with operational efficiency to the piping system, minimizing heat loss in the heating network.
- With EN 15632 certification for Flexalen® 600, ensuring a minimum lifespan of 30 years at temperatures ranging from 80 to 95 degrees, the heating network is guaranteed durability, while the Cradle to Cradle Certified® Certification ensures sustainability for the De Zalmhaven residential complex, highlighting Thermaflex's commitment to environmental responsibility.



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