



Polybutene
Piping Systems Association

Case Study

Amsterdam Central Station, NL



Thermaflex | Flexalen



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Heating and cooling PB-1 piping system for Europe's busiest station

Europe's busiest train station Amsterdam Centraal Station, The Netherlands prepares to service up to 300,000 travellers a day. As a location with such a rich cultural heritage, artistic grandeur, and bustling nightlife, Amsterdam ranks among the most visited cities worldwide. It is no surprise then, that its Central Station is also one of the busiest. Everyday about 250,000 people travel through Amsterdam Central Station, and that number is expected to increase to 300,000 in the coming years.

In order to accommodate this increase, Prorail planned an expansion of the commercial area in the middle tunnel of the station. This complex, with many infrastructural and historical obstacles, required a comprehensive building solution to meet those challenges.



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Goals

As part of the expansion, an easy, yet reliable heating and cooling solution to support shops and restaurants in the middle tunnel of Amsterdam Central Station was planned.

As the historical station is a complex building site with a number of inherent restrictions, ease and speed of installation was a key determinant for the selection of the piping system. The middle tunnel is constructed on a thick concrete shelf on which old steel pipes are installed. Using these steel pipes as guiding ducts was the only possible way to install a new network for heating and cooling.



Because of the long length (20 meters) of the existing steel ducts, no rigid straight lines piping could be used. In addition, the inserted pipe method did not allow any space for connection. A test made by PBPSA member Thermaflex together with Prorail effectively demonstrated that a coiled Flexalen pipe made from Polybutene-1 was perfectly suited for these conditions because it could be easily inserted and pushed through the existing ducts as opposed to traditional rigid systems.

Details

Thanks to the flexibility of the Flexalen PB-1 system it was possible to use the existing steel pipes as an installation duct. In this way a quick and easy connection of all the shops to the central heating and cooling network was achieved.

“ The first phase included half a kilometer of Flexalen insulated pipes. The existing pipes, where the Flexalen pipes had to be inserted, offered only a very small diameter latitude. Thermaflex supplied testing materials and they attended the building site with specialists to assist and give advice. This test was decisive. The excellent flexibility and ability to use Flexalen from the coil turned out to be ideal. We used the Flexalen PB-1 system for the entire project. ”

Koen Sanderman, project manager of De Groot Installatiegroep

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Organisations

- De Groot Installatiegroep (Installer)
- ProRail (Contractor)

Project Duration

- Six months project phase

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