



# SECANT PILE WALL

## VDW RETAINING WALL

In the centre of Odense, the development of the area around Brandts Klædefabrik and Pantheonsgade has opened the way for a two-storey underground parking.

The project drawn by architect Jesper Thyge Brygger comprises a new two-storey underground parking of approx. 2200 m<sup>2</sup> and a four-storey office building of 2400 m<sup>2</sup>.

Due to the adjoining buildings and the very compact soil it was not possible to establish traditional retaining walls of steel sheet piles, as both noise and vibrations would exceed the allowed limits.

### VDW retaining wall

The secant pile wall (VDW) is made of DN520 mm piles, and boring is made with an overlap of 5 cm. Every second pile (secondary pile) is reinforced by a reinforcement mesh or a steel profile with enough strength to stand the load from earth pressure, water pressure and surface load from the adjoining buildings.

The work starts with construction of a guide wall, so that the centre distance between the piles corresponds exactly to the required overlap.

### Underground parking, Brandts Klædefabrik

A 250 mm secant pile wall anchored by double channel wailing and soil anchors is made. The excavation depth is 7.0 metres, and at a short stretch the wall is placed 0.3 metres from Brandts Klædefabrik with a load of 200 kN/m from the 26 metres high facade.

The secant pile wall is bored in 10 metres depth, and the secondary piles are reinforced by HE 260B or HE 280B steel profiles. Aarsleff has executed the work as a sub-contract for Hansson & Knudsen A/S.





## SECANT PILE WALL

The secant pile wall is installed without noise and vibrations which is an important factor for projects in built-up areas. This technique also offers optimum utilization ratio, as the secant pile wall can be placed as close as 5 cm from existing buildings.



*The work starts with construction of a guide wall, so that the centre distance between the piles corresponds exactly to the required overlap.*



*Secant pile wall after excavation.*

### Piling

The division operates all kinds of piling and foundation projects in Denmark and abroad.

The division is one of Europe's largest piling contractors with offices in Poland, England and Germany.

The vast fleet covers the full range from smaller rigs to larger ones; in total 35 - 40 units of fully hydraulic piling and drilling rigs, cranes and vibrators.

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