

Panel

Town centre refurbishment (main thoroughfare) in D-89168 Niederstotzingen

Road: 4 cm bituminous cover layer, 6 cm bituminous binder course, 8 cm base course, 52 cm combined frost protection/base course (70 cm overall height with in-situ, cohesive soil)

Pavements: 12 cm paving, 3 cm paving bed, 35 cm frost protection/base course (50 cm overall height).

Traffic load/imposed load: construction class IV according to RStO.

Edging: drainage trough made from 5 rows of small granite paving stones

Product used:

1,500 sqm VS 5, surface type "ARCADO"

Client

City of Niederstotzingen

Start of work

July 2002

Completion

November 2002

Planning

Gansloser Engineers, D-89568 Hermaringen

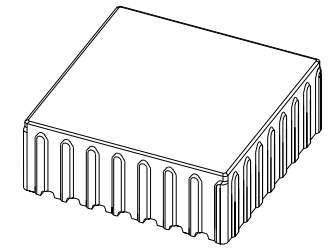
Contractor

Hebel, D-87776 Sontheim

Paving stone manufacturer

braun – Ideen aus Stein, Amstetten/Tübingen

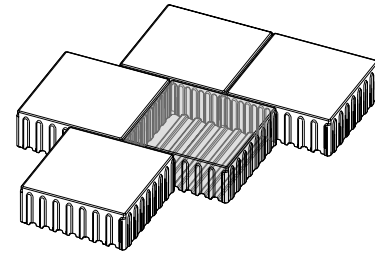
 VS 5[®]



Renewal of the main thoroughfare in the City of **Niederstotzingen**



Renewal of the main thoroughfare in the City of Niederstotzingen



The reinforcement of commercial and public surfaces is very demanding in terms of design and load-bearing capacity. Existing paving systems reach their limits when they are subjected to loads from buses or delivery traffic in pedestrian precincts.

VS 5 is a decorative paving system with shift protection on the sides and the underside of the stones, i.e. on five sides, hence the identifier "VS 5". These shift protection measures ensure that the VS 5 paving remains in position, particularly when subjected to horizontal loads.

The historic City of Niederstotzingen, for which records date back to 1049, has



Well equipped for the future: Niederstotzingen in Baden-Württemberg.

long-standing experience with paved surfaces: Throughout the Middle Ages, the city remained a "Freie Ritterschaft", i.e. a mini-state within the German empire. Numerous horse-drawn carriages and carts took their toll of the paved roads.

Horses and riders have become less common; however, the new challenge was to pave around 1,500 sqm of the main road through the city.



First construction phase: paving work with VS 5.

It was the first time that the planner and the contractor had used VS 5. For this reason, everyone was involved in the initial design stages: the client, the planner, representatives from the public works

In 2002, the City of Niederstotzingen in Baden-Württemberg (near Stuttgart) decided to renew its main thoroughfare, including car parks, pavements and parts of the road itself.

As part of this comprehensive town centre refurbishment, Gansloser consulting engineers from Hermaringen proposed the VS 5 concrete paving stone to the client (City of Niederstotzingen) and managed to convince him of the technological concept of the product from SF-Kooperation. VS 5 stones with "agate white" colour and surface type "ARCADO" were used.



Invisible VS 5 technology: partial view of the finished work.

department, the civil engineering department, the contractor and the paving manufacturer.



stones are turned - they always fit together. In this particular application, the edge stones had to be cut, although normally this is unnecessary if VS 5 is laid following the stone grid. The profiling on the underside of the VS 5 stones is dimensioned such that the profiles have approximately equal width.

protection measures of VS 5 result in higher vertical and horizontal resistance than for all paving stones previously tested there.

Depending on the factory, the stones can be supplied in different colours and with different types of treated surface.

VS 5 is ideally suitable for traffic areas under load from construction class III according to RStO 01.

The successful refurbishment measures in Niederstotzingen not only provided a permanent visual and technological solution, but also enhanced the town centre.



During a joint inspection, all questions relating to the site setup and the schedule for the earth and paving works were discussed.

Apart from the costs, a crucial factor for the choice of paving stone was the combination of appearance and technology - different formats of the VS 5 concrete paving stones can be combined with each other due to their common grid.

The stones were installed manually. The site manager, Mr. Koeberle from the contractor Hebel in Sontheim, was enthusiastic: No matter how the



This results in secure support in the paving bed and thus a high friction coefficient, leading to high resistance against horizontal shifting.

The newly paved parking spaces and pedestrian areas in Niederstotzingen.

Acceptance of the work took place in spring 2003. Both client and planner were very satisfied with the result. Sophisticated tests at the Ruhr University in Bochum showed that the shift



Design detail: VS 5 with light fittings.