



PARDAK®XL

FOR HEAVY TRAFFIC
ON ROOFTOP CARPARKS



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Zoontjens rooftop paving, consisting of high quality specialist paving slabs supported by high density vacuum formed rubber carriers moulded into shape, has been used for numerous rooftop car parks over the years. These systems are suitable for domestic car traffic, with the Pardak®110 system even being able to carry vehicles of a weight of up to 35 kN. Recently, there has been a growing need to admit heavier traffic onto the larger parking decks or roofs. This may be driven by logistics, for example to allow HGV deliveries to shops or supply goods to adjoining business premises, removal vans, or emergency access vehicles e.g. fire engines. For these heavier loads, Zoontjens has developed Pardak®XL.



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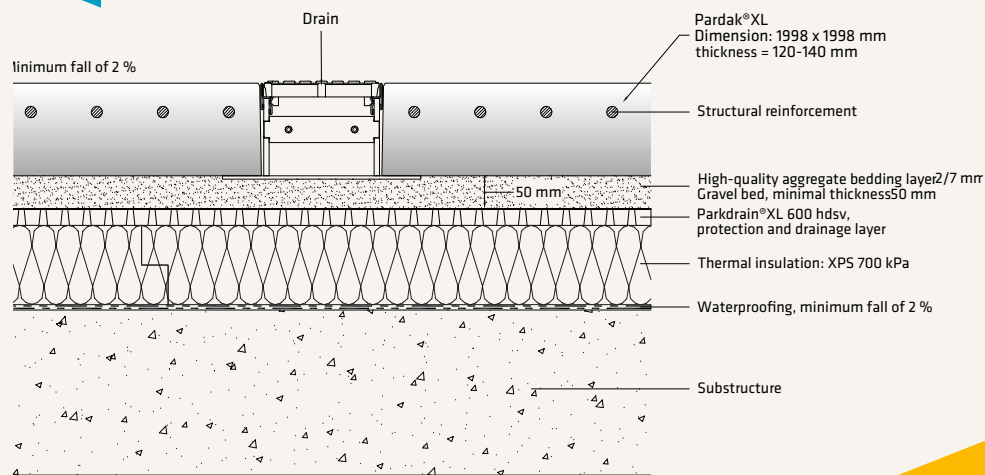
BRANDWEER

112

IE 14.250

CONSTRUCTION

- Waterproof membrane that is always fully bonded to the concrete substructure.
- XPS 700 thermal insulation is applied to an inverted roof. A warm roof construction may be provided with thermal insulation consisting of type S/F cellular glass. The thickness of the insulation must at least match the applicable regulations.
- A 'ventilating' drainage layer in the event of a parking roof (Parkdrain 600hdsv). The drainage layer or the roofing for a parking deck is then covered by a polyester membrane of at least 300 g/m^2 .
- A bed of special natural stone gravel of a minimum thickness of 50 mm. The natural stone gravel is levelled mechanically.
- Pardak®XL slabs, 120 - 140 mm thick concrete slabs of $2 \text{ m} \times 2 \text{ m}$, that are laid using vacuum equipment. A compacted well graded fine sand is swept into the joints.



The Pardak®XL units are laid wide jointed with a nominal 23mm joint (+2mm, -3mm) filled with a compacted well graded fine sand complying with the requirements of EN 12620. The compaction of the sand within the joint, and the complete filling of the joint ensures that there is no adverse effects on shopping trolleys or pedestrians.

DRAINAGE

To enable adequate surface water drainage, a linear drain may be installed between two individual units, in line with the rainwater outlets. These units will be installed with a 250 mm gap between them. A stainless steel edge profile will be mechanically fixed to the sides of the Pardak®XL unit to support a metal drainage grid.

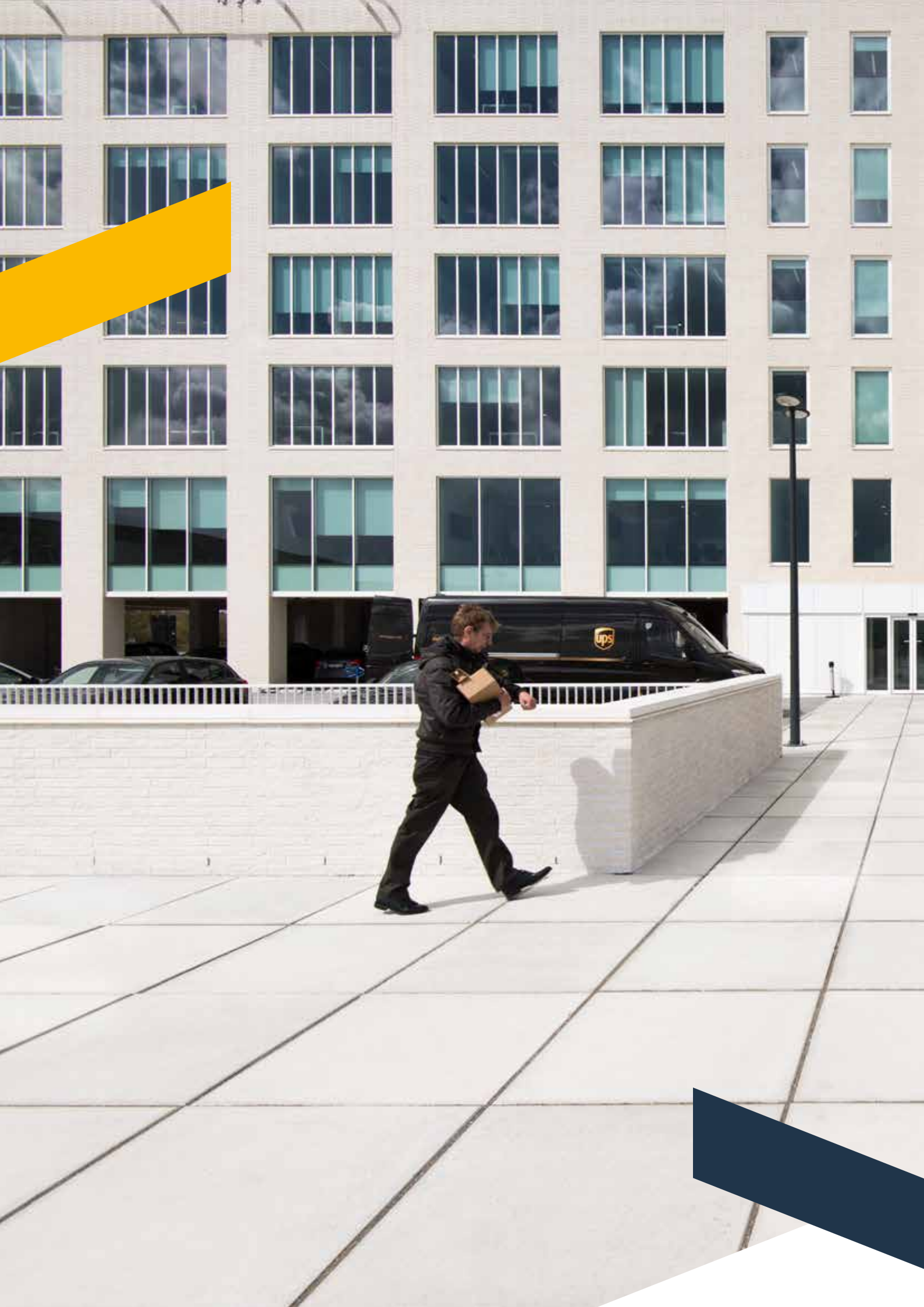
LOAD

The Pardak®XL units are developed for load category 3, i.e. vehicles of a total weight of up to 16 Tonnes are allowed according to the German FLL roof paving car park guidelines. However, access to heavier vehicles, such as fire engines, ambulances and money transport vans, is sometimes permissible. Where this is the case, strict delineation of routes is required, with driving in a linear fashion at a walking pace with no turning or reversing allowed reducing the generation of imposed horizontal loads. The maximum wheel load allowed is 67.5 kN (axle load 135 kN).

3 IN 1 COMPOSITE DRAINAGE LAYER

A 3 in 1 composite drainage layer (fleece, drainage board and filter) is employed on an inverted roof to protect the XPS insulation, and on a warm roof (waterproof membrane and Foamglass type F3) prior to installing the gravel bedding layer. The incorporation of this drainage layer acts not only to remove water quickly, ensuring the thermal properties of the roof are maintained, but also as a protection to the layers beneath, and is a critical component of the system.





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These specifications, constructions and details were prepared according to the latest technological developments and with the greatest possible care. Zoontjens International B.V. accepts no liability whatsoever for any errors or inaccuracies or their consequences. In the interests of innovation and improvements, we reserve the right to make any necessary changes to the products and systems.

WHAT IF THE WORLD WERE TWICE AS BIG

It can be, as far as we're concerned. Our world, twice as big. A world that we are helping to design and construct perfectly with our roof slab systems. Our many years of experience have made us the number one expert in rooftop paving. For sustainable roofs, livable roofs for socialising. We interact with architects and contractors every day. With roofers and project developers. Creators and constructors. We listen to them, work with them and advise them. That's why we're the number one party with the best rooftop vision. It's our higher ground.