rascor®

Complete Waterproofing Concept
RASCOtank

RASCOtank
The System

With the RASCOtank Complete Waterproofing Concept, the structural concrete doubles up as waterproof barrier.

HISTORICAL DEVELOPMENT OF WATERPROOF CONCRETE SYSTEMS

Waterproof concrete structures are by no means an invention of the modern era. The aqueducts, potable water cisterns and baths of antiquity, some of which are still operational even today, testify to this technology's age-old tradition.

The great advances made by the master builders of that time and in the intervening centuries have culminated in products and systems which, today, seem to offer limitless potential. Yet, despite all the available technical innovation, modern-day construction practice often fails to match the quality and durability of these ancient structures.

The most frequent cause of these shortcomings is the belated – or even lack of any – waterproofing provision during the design process.

RASCOTANK DESCRIPTION

The RASCOtank complete waterproofing concept covers, firstly, the design and spacing of joints with due allowance for structural requirements, the control of shrinkage and shrinkage cracks, as well as concrete placement and curing. At the same time, RASCOtank also includes installation of the RASCOtec injection system plus associated grouting when the concrete has hardened.

RASCOR GUARANTEE

RASCOR delivers integral, start-to-finish solutions spanning the entire design and construction phases and backed by an up to ten-year waterproofing guarantee.

APPLICATIONS

The RASCOtank waterproof concrete basement system caters for tailored solutions in a wide range of application fields, including residential development, light- and heavy-industrial schemes, sewage treatment works, refuse incineration centres, chemical industry facilities and potable water tanks.

BENEFITS OFFERED BY RASCOTANK

The earlier our specialists are involved in the design process, the easier it is to capitalize on all the benefits offered by the system, such as:

- Savings on concrete, reinforcement and work execution
- Weather-independent system
- Shorter construction times possible
- Full, up to ten-year guarantee for watertight structure
- Fixed price for entire work package
- No need for alternate bay („chequer-board") construction or shrinkage gaps
- Project changes/variations are feasible with no negative impact on cost or guarantee
- Single-point responsibility for integral waterproofing concepts, from design to post-completion
- All the benefits of decades-long experience and innovation
- Professional solutions for any waterproofing challenge, however complex
- No project modifications or additional works needed to accommodate waterproofing system

RASCOtank
Our Concept

DESIGN

The success of a waterproof concrete basement solution depends on the proper co-ordination of three key factors: concrete, joints/penetrations and detailing.

Prior to the start of design work, the client needs to provide a clear specification of the waterproofing performance required for each particular part of the structure.

Only when the requirements placed on the waterproofing concept have been defined can work commence on designing an integral scheme that takes account of groundwater/gravitational water conditions, building geometry, construction programme and various other factors.

Our in-depth waterproofing expertise enables us to analyse all the parameters and pinpoint the optimum solution for any particular case. Our detailed tenders also include CAD production drawings.

No-compromise waterproofing guarantee for up to ten years!

CONCRETE QUALITY

Concrete quality is key in determining the waterproofing performance of a concrete structure. The specification of concrete type and workmanship thus demands the utmost care. The use of concrete with a relatively low compressive strength and high resistance to water penetration, e.g. a C25/30 grade to EN 206-1 with water penetration $e_w \leq 50$ mm to EN 12 390-8, is recommended. The certification of watertightness should not be based on standards, such as the Swiss SIA 262/1, that only consider water permeability in the absence of hydrostatic pressure.

JOINT SEALING

The use of RASCOtec injection channels allows weather-independent grouting. Given that RASCOflex acrylic grout does not rely on adhesion to the joint faces, no elaborate preparation of the base – which may be rough or smooth – is necessary.

CRACK–INDUCING UNITS

The incorporation of RASCOtec crack-inducer allows concrete pours of any size (with controlled cracking at the required locations). This may sometimes have the positive effect of reducing the reinforcement requirement and shortening construction times!

PENETRATIONS

Regardless of size, shape and constituent material, all penetrations can be simply, reliably and permanently sealed using RASCOtec injection collars.

GROUTING

Both the RASCOR grouts and the associated grouting machines are the company's own developments. These products have been constantly refined during their 50-year history of day-to-day practical use on building sites.

RASCOtank
Site operations

SITE OPERATIONS

When all the necessary design details are complete, our specialists on site ensure that the specified works are executed on time and in accordance with best practice.

Quality consciousness and a commitment to excellence inform our everyday activities.

QUALITY AND EXPERTISE

Our consistently high quality is maintained through regular staff training and development programmes.

Drawing on a wealth of knowledge and experience, our highly skilled operatives are committed to meeting the very highest standards of practice. What better guarantee for impeccable workmanship across the board!

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MONITORING

Quality assurance is essential in achieving the specified standards of work execution. These activities are performed all the way through to acceptance, handover and the start of the defects liability period.

Our specialists also supervise works performed by third-party contractors, e.g. concrete placing, fresh concrete testing and concrete curing.

CURING

Proper concrete curing is crucial for success. Compliance with the specified striking and curing times is paramount. Moreover, to achieve the required concrete quality, due allowance always needs to be made for local conditions, e.g. temperature, incident sunshine and wind conditions, which also play a vital role in curing.