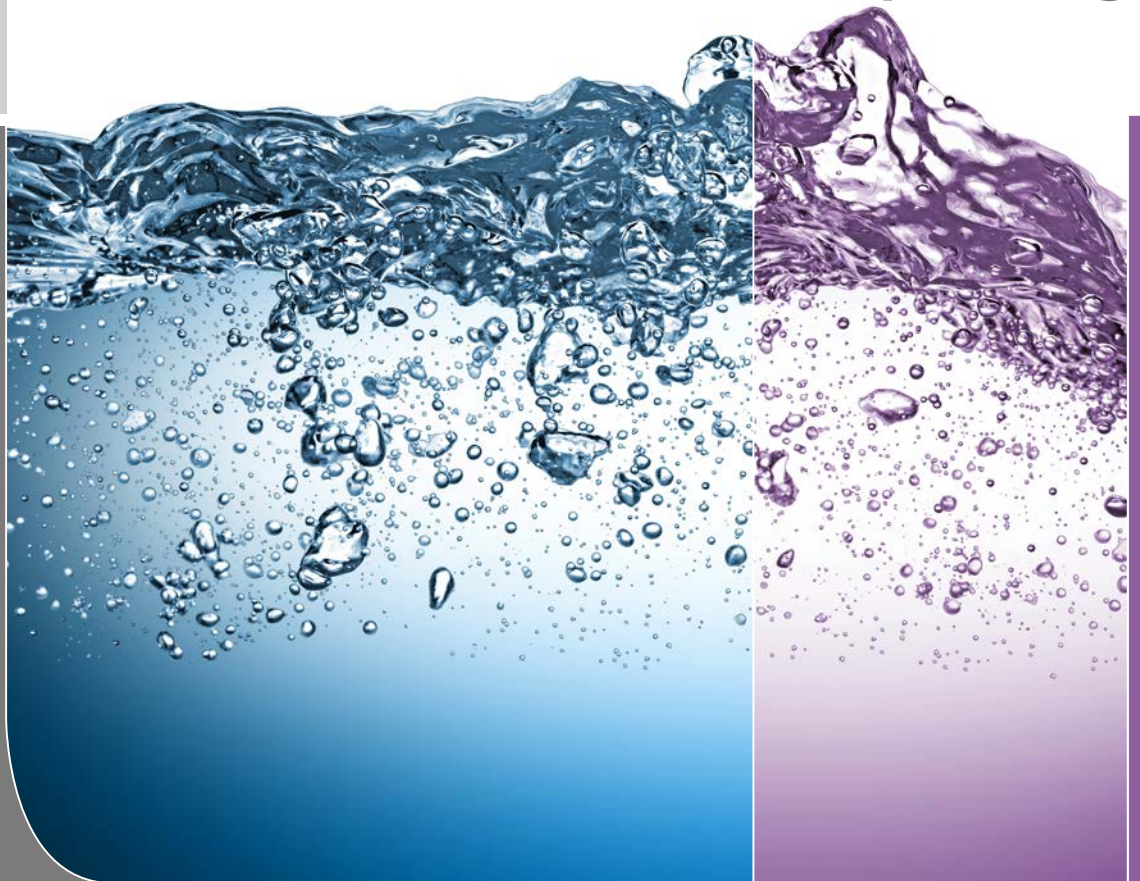


rascor[®]

Pioneers in waterproofing



rascoor®

BEING A TRUE PIONEER MEANS MORE THAN SIMPLY
RESTING ON THE LAURELS OF PAST TRIUMPHS!

FOREWORD

Evolution to quality thinking



RENÉ P. SCHMID

RASCOR Group President

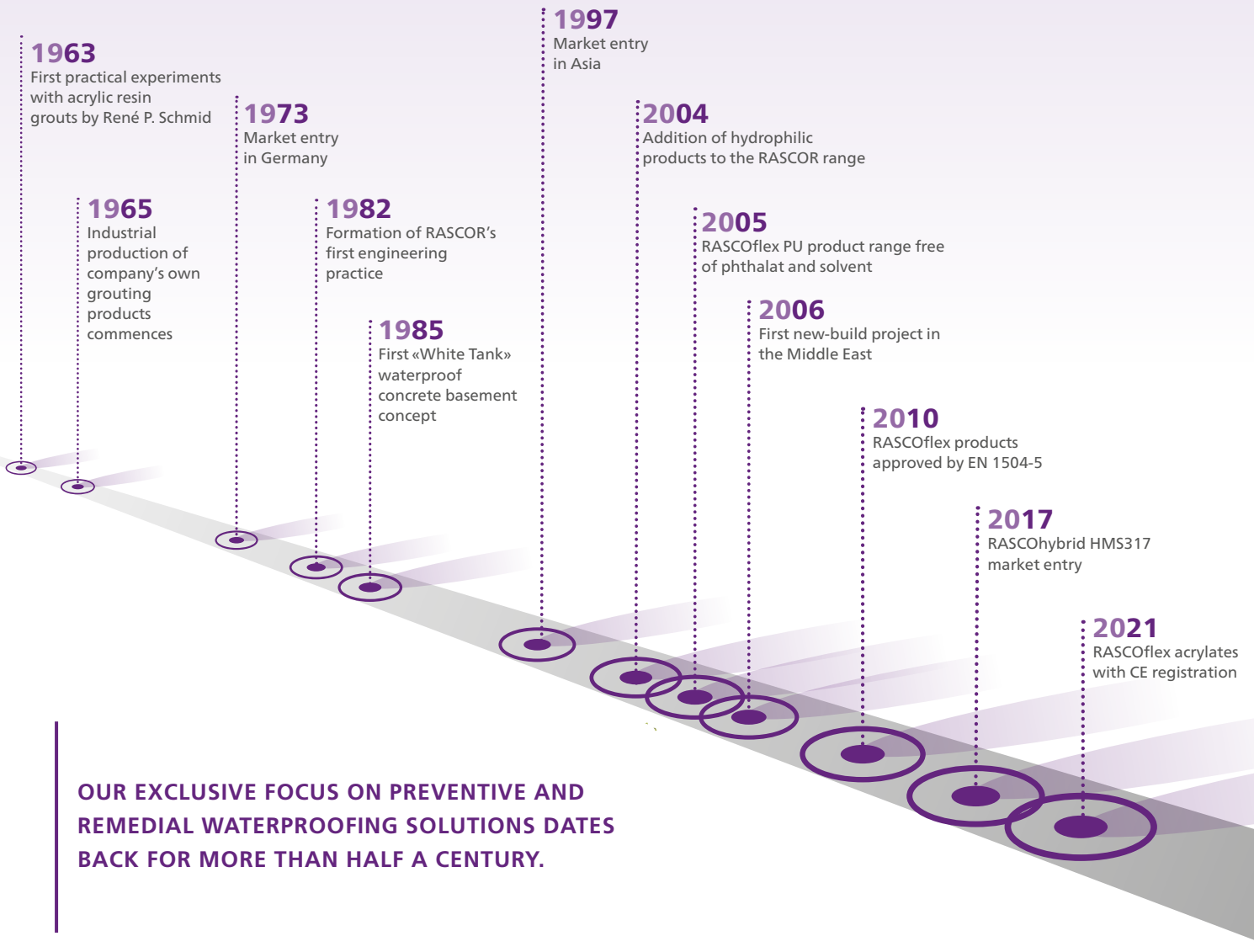
RASCOR is a highly specialised group of enterprises in the field of waterproofing, such as injection techniques, building preservation, building restoration, new build waterproofing concepts, ground stabilisation and ground improvement. The basis was already laid in 1965 and has been extended continuously. Today, RASCOR is the specialist company for all waterproofing issues concerning every aspect of civil engineering, as well as in tunnels and special constructions underground.

Ever since the mid 1960's RASCOR has been producing and selling waterproofing materials worldwide. Several regional RASCOR branches also execute works with RASCOR material.

It has always been our goal to produce materials of a high technical quality that are also safe for the environment. Even if through the years standards and regulations have become more strict, it is still our great goal to not only comply with them, but to even raise the bar.

DEVELOPMENT AND EXPERIENCE

Development and experience



A veritable waterproofing pioneer, René P. Schmid was the first in the sector to develop an acrylic formulation suitable for grouting. This innovation not only marked a milestone in materials science, but also had major implications for the future course of the waterproofing market. Indeed, demand rose so rapidly over the next four years that the company soon abandoned its manufacture-to-order strategy in favour of manufacture-to-stock. The following years saw a further refinement of grouting techniques to complement the company's rigid waterproofing solutions. As early as 1977, the thousandth building was successfully waterproofed by injection methods.

In response to the growing demand, also from abroad, René P. Schmid moved outside Switzerland in 1972 and set up a company for building preservation and repair in Germany. This was followed by further subsidiaries in Germany and Austria. The groundbreaking joint ventures in Japan and Hong Kong represented a new departure for the Group: for the very first

time, a third-party contractor was entrusted with the waterproofing works, with RASCOR's role confined to lead management and supervision. This experience was the basis for a sales and distribution system through certified partners. The 1980s saw an increasing focus on waterproofing provision as an integral part of the design process. RASCOR proceeded to develop rapid, economical, grout-based waterproofing solutions for preventive implementation during the construction process.

For RASCOR, this turned out to be a defining moment and preventive waterproofing systems went on to shape the future of the entire sector. Accordingly, such solutions now account for over 80% of turnover.

The «White Tank» concept launched in the late 1980s entailed use of the concrete basement structural elements to provide the waterproof barrier. Additional joint seals and waterproofing slurries were needed for the first systems due to the concrete quality at that time, which fell far short of present standards.

D EXPERIENCE



RUBEN SCHMID
CEO of the RASCOR Group



NORBU LIEBETRAU
Sales Manager International



CHRISTIAN WÄHRISCH
Technical Director Tunnelling
and Special Civil Engineering



Quality and optimisation are our constant companions in our daily work, be it in the field of production, engineering, execution or administration.



Just in time is omnipresent in the current working environment. Our flexibility and quick reaction is, next to high quality products, an important factor for success.



Individual solutions have become the standard. Our employees are not only experts for our products, but they also know the technics and the problems of our clients. Therefore, they are able to provide optimal support.



Selected RASCOR memberships

- CEN (European Committee for Standardization) TC 104, SC8 (concrete + grouting)
- SIA (Swiss Society of Engineers and Architects)
- ITA-AITES (International Tunnelling and Underground Space Association)
- STUVA (German Research Association for Underground Transportation Facilities)
- ICOLD (International Commission on Large Dams)
- WTA (International Association for Science and Technology of Building Maintenance and Monuments Preservation)
- FGV (German Grouting Association)
- VCI (German Chemical Industry Association)
- ÖVBB (Austrian Society for Concrete and Construction Technology)
- VSB (Association of Swiss Concrete Technologists)
- VBK (Swiss Association for Building Preservation and Plastics Technology in Construction)
- DAfSb (German Committee for Reinforced Concrete)

SKILL AND EXPERTISE

Skill and expertise

**RASCOR – EXPERTISE
IN PREVENTIVE AND REMEDIAL
WATERPROOFING.**

RASCOR's exclusive focus, from the start, on waterproofing systems has enabled it to accumulate a wealth of know-how. Today, the company's in-depth skill and experience are applied in three separately operating divisions.

Products

Products worldwide
Manufacture and marketing of waterproofing materials.

Engineering

Engineering
Pools know-how for application in the design of waterproofing solutions.

Works

Works
Offers an all-round waterproofing service.



Remedial waterproofing



Preventive waterproofing at construction joints, crack control (dummy) joints and penetrations



All-round waterproofing concept with guarantee



General building construction and civil engineering

Ever-changing requirements and user needs call for increasingly sophisticated waterproofing solutions.

Application fields include: residential development, light- and heavy-industrial schemes, basement car parks, underpasses, sewage treatment works, refuse incineration centres, chemical industry facilities, potable water tanks, etc.

Hydroelectric power stations

The large water volumes, high hydrostatic pressures and massive concrete structures associated with hydroelectric power stations place exceptionally high demands on the waterproofing concept. Moreover, the vibrations acting on the elements near the turbines necessitate special solutions for the shell/turbine housing junctions and the structural joints.

Tunnel schemes

Both cut-and-cover and bored tunnels (lined with in-situ concrete or tubings) figure prominently in RASCOR's day-to-day operations. We particularly pride ourselves on our expertise in handling cross-passages, underground stations and similar applications that call for uncompromising solutions.

While more or less the same RASCOR products are applied for all facility types, considerable experience is needed to determine the appropriate combination and waterproofing procedure. We can accurately assess the specific implications and requirements of any particular scheme, whether a potable water container, a sewer, an apartment block or an underground railway station. Moreover, the various contract types – e.g. remedial waterproofing, preventive waterproofing or integral solution with guarantee – also necessitate a tailored approach.

PRODUCTS AND SYSTEMS

Products and systems

OUR UNIQUE PREVENTIVE AND REMEDIAL WATERPROOFING PRODUCTS ARE SUITABLE FOR TACKLING ANY TYPE OF WATERPROOFING PROBLEM. WHATEVER THE BRIEF, RASCOR'S SYSTEMS WILL DELIVER THE PERFECT RESPONSE.



Ultra-modern machines and computer systems guarantee flawless production. RASCOR's production and dispatch teams vouch for the safe and punctual delivery of products to the site.

All RASCOR products are manufactured in-house in the company's laboratories and undergo continuous quality control. Environmental compatibility enjoys a high priority. New developments are laboratory tested and subjected to the most rigorous quality controls.

RASCOR makes a point of informing and educating its clients through courses, seminars and workshops.



The experience gained from everyday site practice and the encountered demands provides valuable feedback, which is used to refine both products and machines.

Environmental compatibility and durability

RASCOR's products are continually adapted in line with the latest standards and guidelines. Eco-efficiency plays a pivotal role in this regard, the achievement of maximum compatibility representing a cornerstone of corporate policy. To meet the wide-ranging demands placed on chemical resistance, RASCOR offers a variety of formulations that can be dovetailed to the needs of any particular project.

Grouting products

RASCOflex acrylic grouts are based on a wide variety of eco-friendly, two-component acrylic resin formulations that provide a reliable barrier against water infiltration and water loss in all areas of building construction and civil engineering. Operating on a unique principle, the RASCOflex acrylic grouts have delivered top-class waterproofing performance at countless locations throughout the world for decades.

The RASCOflex polyurethane resins are highly expandable materials used for filling cracks and voids in remedial waterproofing. RASCOflex acrylic and polyurethane products also serve to grout the RASCOtec injection systems. RASCOsec ASH and RASCOsec HME are used to provide a consolidating, water-repellent barrier against rising damp in absorbent mineral masonry, e.g. rubble, rammed concrete, clay or calcium-silicate brick / block and natural stone walls.

SYSTEMS



Machines and accessories

The RASCOR one, two or three component grouting machines allow continuous adjustment of pressure and flow rate during injection. The various accessories, including injection nozzles, mixer units, etc., are made out of high-grade stainless steel.

Grouting systems

The RASCOTec system embraces various types of prefabricated units for subsequent injection with grouting materials. The RASCOTec product family constitutes a unified, professional system of components that lends itself to use for all waterproofing applications. The high technical standard of RASCOR's waterproofing technology is reflected by the company's unique detail solutions.

Hydrophilic systems

The RASCOTight system comprises a wide variety of hydrophilic strip products that swell upon contact with water.

Bonded waterbar systems

The bonded waterbar is applied to construction and movement joints in hardened concrete that may or may not be exposed to hydrostatic pressure.

Ground stabilisation and cavity fillings

For the improvement of ground and rock, the hybrid system RASCOhybrid HMS-series (a combination of PU and cement suspension) or also the RASCOflex GT2-series (colloidal-silicas) are especially suitable.

Ballast bonding

RASCORail products are applied on the ballast bed by watering can or spray method. This way sliding of the ballast bed during building works is prevented. It also improves the lifespan of the ballast bed in transition from soft to hard foundation.

Engineering

**ONE-STOP SHOPPING WITH NOTHING LEFT TO CHANCE –
WHAT COULD BE MORE CONVENIENT THAN TO DELEGATE
THE ENTIRE RESPONSIBILITY FOR WATERPROOFING PROBLEMS
TO A PROVEN SPECIALIST.**



Concrete technology is constantly evolving. Prompted by the increasing complexity of and higher demands placed on concrete in the preceding decades, RASCOR decided, as early as 1982, to open its own engineering practice in order to facilitate application of its waterproofing know-how to the design of concrete structures.



Waterproofing is nowadays recognized as a touchstone of construction quality. Sophisticated products applied within the framework of an integral system are more crucial than ever! State-of-the-art waterproofing far transcends the mere installation of sealants and waterbars. The engineering component has become key to professional waterproofing design. The application of experience and know-how in meeting technical requirements and current standards plus the ability to pinpoint optimum solutions are absolute prerequisites for the successful development of an integral waterproofing system!

RASCOR's "White Tank" system is not simply a combination of waterproof concrete and joint seal. Due weight is given to the relevant structural factors, correct design and layout of joints, specification of a suitable concrete grade and suitable provision for the particular types of penetration. Anything less may culminate in an endless nightmare of leakages and skyrocketing costs!!





RASCOR'S INTEGRAL SOLUTIONS OFFER: SINGLE-POINT RESPONSIBILITY

- Prime waterproofing performance with up to ten-year guarantee
- Single point of contact for all basement waterproofing works
- Shorter construction period
- Lumpsum price for entire waterproofing package
- Partner with unrivalled waterproofing experience

OUR ENGINEERED WATERPROOFING SOLUTIONS FEATURE A NUMBER OF INDISPENSABLE ELEMENTS:

Concept design

RASCOR's engineers analyse the overall scheme in terms of structural design, groundwater / gravitational water conditions, facility size and occupancy.

Detail design

Full responsibility is assumed for key aspects of design affecting reinforcement, joint type and layout, concrete formulation, concrete placing and curing.

Works

Our engineers provide counselling on and actively supervise the incorporation of the «White Tank System» RASCOR waterproof concrete basement system.

Monitoring

Quality assurance is essential to the achievement of the specified standards of workmanship. These activities are performed all the way up to acceptance / handover and the start of the defects liability period.

Despite clear-cut project information in the form of drawings and specifications, and identical, recurring building elements, ad hoc changes with implications for the waterproofing system frequently prove necessary. Even in such cases, our flexible system, backed by a specialist team, will guarantee 100 % watertightness.

WORKS

Works

RASCOR'S SKILLED, COMMITTED WATERPROOFING SPECIALISTS ARE PRESENT ON SITE TO GUARANTEE TOP-QUALITY WORKMANSHIP.



The contracting companies perform the full complement of preventive and remedial waterproofing works for all areas of building construction and civil engineering.

The RASCOR "White Tank" waterproof concrete basement system achieves cost and time savings for clients, designers and contractors alike. With a qualified specialist always at hand, nothing is left to chance in ensuring the development of a professional solution and the successful delivery of a watertight structure.

In preventive waterproofing applications, RASCOR can truly supply the perfect solution to any particular problem.

RASCOTec injection systems and RASCOTight hydrophilic systems are certain to provide the ideal answer to your specific needs.

Project designs that make minimal, if any, waterproofing provision are far from uncommon. Thanks to our vast experience in remedial waterproofing, we can make even such facilities absolutely watertight. Once the refurbishment concept has been prepared, our specialists can waterproof the structure in next to no time using hand-picked products to match the particular demands.



Efficiency

Backed by a fleet of ultra-modern vehicles, our swift, flexible service ensures top-class performance and economical deployment on any site.

Quality

Our permanently high levels of excellence are upheld by means of regular training courses attended by our staff.

Expertise

Bringing to bear a wealth of knowledge and skill, our highly experienced operatives carry out the works to the highest of standards. What better guarantee for impeccable workmanship across the board!

RASCOR worldwide

The various companies work separately within their particular geographical area or, in tandem, at national and international level. RASCOR collaborates with its contractors in developing and implementing projects across the globe.

THIS IS WHERE YOU WILL FIND US:

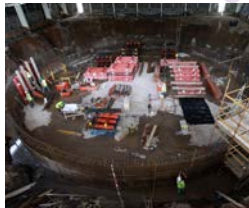
- Switzerland
- Germany
- Austria
- Italy
- Ireland
- United Kingdom
- France
- Spain
- Romania
- Netherlands
- Hungary
- Middle East
- China
- Malaysia
- Singapore
- Japan
- as well as in South America

REFERENCES

Waterproofing solutions worldwide



Dry Dock
Glasgow, Scotland



Aqua dynamic research centre, University of Edinburgh, Scotland



Opera House
Copenhagen, Denmark



Mater Hospital
Dublin, Ireland



Storebælt Bridge and Tunnel,
Denmark



Power station by the river, Rheinfelden, Switzerland



Domino Training Centre Berne, Switzerland



Airport (several projects)
Zurich-Kloten, Switzerland



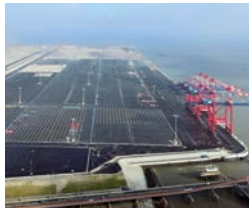
Dam on River Danube, Austria



Computer centre ENI Sannazaro de Burgondi, Italy



Teatro alla Scala
Milan, Italy



Jade-Weser-Port
Wilhelmshaven,
Germany



Airport Munich,
Germany



Underground car park
Groningen,
Netherlands



Fresh Water Container
Dublin, Ireland



Metropolitana
Milan, Italy



High speed train track
Udalaitz, Spain



Road Tunnels
New Doha Airport, Qatar



SMART Tunnel
Kuala Lumpur, Malaysia



Underground car park
Casino Wynn Macau,
China

Rascor International Ltd.
Gewerbestrasse 4
CH-8162 Steinmaur
Switzerland

Phone +41 (0)44 857 11 11
Fax +41 (0)44 857 11 00

info@rascor.com
www.rascor.com