



Construction Swiss GmbH

Building tunnels  
with trust





## Competence from tradition, Future through innovation

Since 2001, we have been working for our customers as a medium-sized specialist and service provider. In these 20 years, we have focussed on conventional and mechanised tunnelling. Thanks to our know-how we are your partner for smaller as well as larger and more complex tunnelling projects. In the Gotthard Base Tunnel, we have also carried out the railway engineering and track construction work.

We are happy to turn your ideas into reality and work out advantageous solutions with you. The trustful partnership with our clients and the tireless dedication of our about 60 employees have made our success possible over the years. Our drive is your satisfaction and our passion for tunnelling. Our actions are characterised by integrity and we attach great importance to our Code of Conduct. If you have any questions or would like more detailed information, feel free to contact us. We will be happy to serve you.

Sincerely  
Philipp Kohlschreiber,  
Managing Director

### Our strengths, your advantages:

- ▲ Many years of experience in small and large tunnel construction projects
- ▲ Know-how in railway logistics, track construction and railway technology
- ▲ Innovative strength
- ▲ Professional competence at the highest level
- ▲ Grown positive corporate culture
- ▲ Flawless and punctual execution

**2020**

Ballast Nedam takes over 49% of the shares in Heitkamp Construction Swiss GmbH. 51% remain in the possession of Renaissance Construction.

**2015**

Renaissance Construction GmbH becomes Heitkamp Construction Swiss GmbH. Relocation of the registered office from Hergiswil (Canton Nidwalden) to Dierikon (Canton Lucerne).

**2014**

The Renaissance Group acquires Heitkamp Ingenieur- und Kraftwerksbau GmbH in Germany.

**2013**

The Renaissance Group acquires Alpine-Bau GmbH in Switzerland. Alpine now operates under the name Renaissance Construction GmbH.

**2001**

Alpine-Bau GmbH is founded in Hergiswil in the Canton of Nidwalden. It is a subsidiary of Alpine Holding from Salzburg in Austria.

## Expert for all kinds of demanding tunnel constructions.

In tunnelling, as part of classical infrastructure construction, we bring the highest level of competence and many years of experience - especially in conventional, but also in mechanised hard rock excavation. Together with our highly motivated and specialised teams, we are able to develop holistic

and intelligent solutions for tunnelling in small and large infrastructure projects. Depending on the project scope and requirements, we work alone, in joint ventures or in consortia to achieve the greatest possible benefit for the client in all project phases.

### Mechanized tunnelling

Tunnel boring machines are particularly efficient if they can be used over longer distances and the geological conditions do not vary much. Mechanized Tunneling impresses with a high degree of automation in addition to being very efficient.

The segmental lining (prefabricated concrete segments) can be used directly after excavation, which in most cases also serve as interior lining. Alternatively, in stable rock conditions, securing with shotcrete is also possible.

### Our portfolio:

- ▲ Mechanised tunnelling in hard rock
- ▲ Conventional, machine-supported tunnelling in hard and loose rock
- ▲ Blasting
- ▲ Cavern construction
- ▲ Inner lining work
- ▲ Know-how in railway engineering.





## Project: Kerenzerberg Tunnel

The 5,700-metre-long Kerenzerberg Tunnel is a road tunnel on the A3 motorway between Weesen and Murg, in the vicinity of the Walensee. Today's safety standards require a safety gallery above a certain road tunnel length, which can be used for emergencies. The construction of the new safety tunnel is taking place under traffic of the main tunnel and will be completed in 2024.

▲ TBM excavation: approx. 5'250 m  
Excavation of the safety tunnel (SiSto)

▲ Blasting: approx. 32,700 m<sup>3</sup>  
Excavation of the SiSto start tunnel (approx. 250 m)  
Excavation and securing of the underground west and east sub-centres  
Excavation of 18 cross-connections and 52 exhaust tunnels up to the existing road tunnel

### Client:

▲ Bundesamt für Strassen ASTRA (Federal Roads Office)

### Execution:

▲ JV KER450

### Construction sum:

▲ CHF 107 million

### Construction period:

▲ 2020 to 2024





## Project: Arosa Tunnel

The Arosa Tunnel is a 299-metre-long railway tunnel in the municipality of Arosa in the canton of Graubünden. The railway line connects the mountain village with the canton capital Chur. Due to its long-standing use, the tunnel had to be renovated during three construction seasons (in the summer months). The existing inner lining was demolished and the profile widened. Before the new inner shell was installed, the tunnel was sealed. In addition, the portals were built in block masonry.

### Client:

▲ Rhaetian Railway Ltd.

### Execution:

▲ Heitkamp Construction Swiss GmbH

### Construction sum:

▲ CHF 22 million

### Construction period:

▲ June 2020 to June 2022



Ihr Partner für Tunnelbaumaschinen



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### Conventional tunnelling

Blasting and excavation are mostly used when the tunnelling lengths are either small or the rock conditions are highly changeable. Conventional tunnelling is very variable and can be adapted to the prevailing conditions at any time. In most cases, the tunnel is secured with shotcrete and anchors and an inner lining of cast-in-place-concrete is installed.



## Take up Speed

As a specialist for railway technology, we have realised the challenging Gotthard Base Tunnel railway project. Our core competence was the construction of special track systems such as slab track and mass-spring systems. These systems are used wherever the rail network is subject to high and complex usage and construction requirements.

### Project: Gotthard Base Tunnel

- ▲ Slab track: 2 × 57 km in tunnel
- ▲ Open track: 39 km ballasted track
- ▲ Switches: 8 high-speed switches, 35 track switches on open track
- ▲ Support system: 380'000 LVT Mono blocks

#### Execution:

- ▲ JV Transtec Gotthard

#### Client:

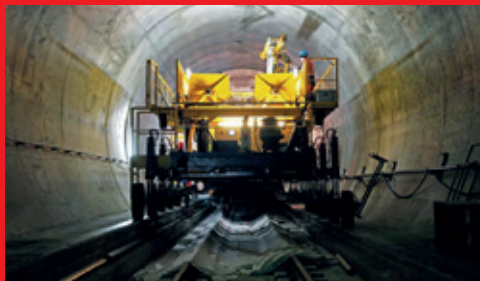
- ▲ Alptransit Gotthard AG

#### Construction sum:

- ▲ CHF 1.8 billion

#### Construction period:

- ▲ 2008 to 2016

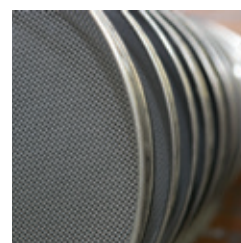
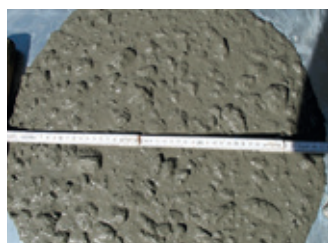


FRISCHBETONPRÜFUNGEN

FESTBETONPRÜFUNGEN

GESTEINSKÖRNUNGEN

KIESGEMISCHE



## QUALITÄT WIRD BEI UNS GROSS GESCHRIEBEN

## Professional support in all construction phases

The assessment of the geology and the selection of the securing methods are decisive for securing the excavated cross-section, until completion of the final lining. The spectrum of conventional tunnelling ranges from excavations in loose rock over excavations under compressed air until classic blasting.

In hard rock, excavation is usually carried out by blasting. In unconsolidated rock, tunnel excavators are used. After the excavation, the exposed areas are secured with shotcrete, rock bolts, steel arches and other construction elements.

After completion of the excavation and securing, the installation of the sealing and the inner lining takes place. The system must be able to withstand the rock and water pressures over the planned lifetime of the structure.

Asbestos was predicted in the rock at the Brandberg tunnel. To protect the workers against the health-endangering fibres, excavation and securing was carried out under full respiratory protection and with protective suits. Due to the asbestos contamination, the excavation area was isolated from the surrounding area by means of a sluice.



## Project: Brandberg Tunnel

The future 881-metre-long Brandbergtunnel is a road tunnel on the territory of the municipality of Winden im Elztal (Germany). The tunnel is being built to relieve the city centre from heavy traffic on the National Road 294.

The Brandberg tunnel is being built over a length of 765 metres using conventional construction methods. Accordingly, the tunnel was advanced using blasting and excavation method, whilst the cross section was divided in calotte and bench. The 116-metre-long exit-and-entry trough structures, on the other hand, is being built using the open cut method.

- ▲ Tunnel length: conventional 765 m / open cut 116 m
- ▲ Trough construction method 86 m
- ▲ Blasting

### Execution:

- ▲ JV Brandberg

### Client:

- ▲ Regierungspräsidium Freiburg i. B.

### Construction sum:

- ▲ CHF 53 million

### Construction period:

- ▲ 2019 to 2023



# Diamantbohr



- Bohren
- Schneiden
- Kontrollierter Rückbau

diamantbohr.com



## Our ambitions abroad

In addition to our core market in Switzerland, we would like to increasingly offer and carry out projects in neighbouring German-speaking countries in order to broaden our base. In

the longer term, we also plan to enter the market in other European countries.

# Maresti

## MINEURE, BAUARBEITER MASCHINISTEN

Beschaffung und Platzierung qualifizierter Mitarbeiter. Maresti Personal AG bietet professionelles Personalmanagement im Tunnel-, Tief- und Seilbahnbau. Dadurch besteht die Möglichkeit, entsprechend schnell und flexibel auf Anforderungen zu reagieren.

### TUNNELPERSONAL

- Ganze Drittel
- Mineure
- Maschinisten
- Sprengmeister
- Baumaschinenmechaniker
- TBM- Mannschaften
- Logistiker
- Elektriker
- Kranführer
- Schlosser
- Beton-Mischmeister
- Kieswerk

### TIEFBAU

- Poliere
- Vorarbeiter
- Bauarbeiter
- Maschinisten
- Kranführer
- Logistiker
- Schlosser
- Bohristen
- Konstrukteure

## ANLAGEN- UND MASCHINENMONTAGE

Maresti Montagen bietet professionelle Anlage- und Maschinenmontage an. Dank unseres Know how's, innovativen Dienstleistungen und einer hohen Zuverlässigkeit hat sich die Maresti Montagen als fester Partner national und international etabliert.

### LEISTUNGEN

- Erfahrene, motivierte Fachleute Ausgestattet mit hochwertigen Werkzeugen, Berufs- oder Sicherheitskleidung
- Vermietung von einzelnen Fachleuten oder Gruppen, mit Gruppen- oder Bauleiter
- Fuhrpark mit Fahrzeugen, Anhängern und Transportern Hebebühnen, Seilzugwinden etc. sind auf Wunsch verfügbar
- Einsätze Tag und Nacht möglich

### ARBEITSBEREICHE

- Industrie- Baumontagen
- Stahlbau- und Maschinenmontagen
- Montagen und Unterhalt von Kies- und Betonwerken
- Neubauten und Revisionen von Wasser- aufbereitungen
- Förderbandanlagen
- Seilbahntechnik, Stahlseilspleissungen
- Mechanik und allgemeine Bauschlosserarbeiten

## Our employees

Our employees are our most valuable asset and the key to our success. Accordingly, we treat each other with respect and offer opportunities for development and training.

We value a healthy mix of young and experienced employees so that we can benefit from each other. We strictly reject discrimination or inappropriate behaviour - we maintain an open discussion culture where everyone is allowed to speak their mind.

All our employees are paid fairly and in line with the market, we also offer part-time models and the possibility to work from home.





Construction Swiss GmbH

We are here for you!

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