



Solutions, that connect.

Our range of services

We develop pipe and shaft systems for virtually every requirement. We assist clients throughout the world with our know-how. Our most important areas of expertise are:

DESIGN AND CONSTRUCTION

- Pipe and shaft design
- Jacking stations (intermediate jacking stations)
- Bentonite lubrication systems
- Pressure pipes
- Inliners
- Special built-in parts

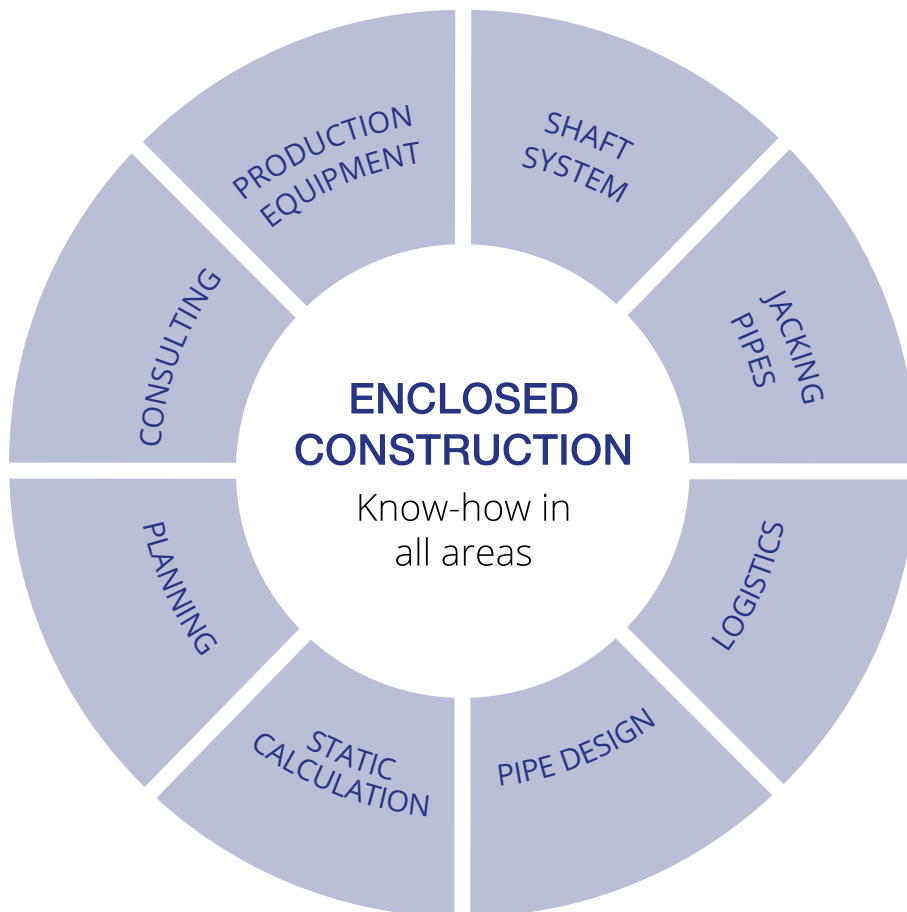
CALCULATIONS

- Static calculations
- Sealing calculations
- Transport anchor
- Buoyancy calculations
- Radius calculations
- Jacking force calculations

SPECIAL SERVICES

- Consulting
- Engineering
- Supervising
- Joint Venture
- Leasing of production equipment
- Sale of production equipment
- Sale of installation materials
- Planning and provision of a temporary field factory / production facility
- Plant planning

Company profile: Solutions that connect.



Innovation and experience: For more than 50 years, Gollwitzer has stood for bespoke Pipe and Shaft systems. We develop and produce sophisticated one-off solutions for our partners throughout the world — reliably, flexibly, competently.

And that's not all. As a full service provider we support our customers throughout all phases of project development: from consulting and development via logistics to final implementation. In the process, we guarantee that the project goes without a hitch and ensure that schedules and budgets are rigorously adhered to. The benefit for our partners -a one stop shop for pipe and shaft solutions.

Our pipes are used throughout the world for supplying drinking water, oil, gas and electricity. They are also used in sewage disposal or as medium tunnels. Especially when it comes to shaft construction we develop innovative systems -for almost all soil types and possible uses.

In the past 50 years we have completed several thousand projects both at home and abroad. This entailed developing solutions for our customers that create connections and work successfully for you -now and in the future.

Pipe technology: solutions for every terrain

Achieving the goal with jacking technology.

Our pipe jacking is used in all kinds of conditions: it works its way through rock, silt and clay but is also suitable for softer soil types such as gravel or sand. Using state of the art technology, our reinforced concrete pipes can achieve jacking distances in excess of 1,500m and curved trajectories up to a radius of 300m. All that at an internal water pressure of up to 25.0 bar and an external water pressure of up to 8.0 bar.

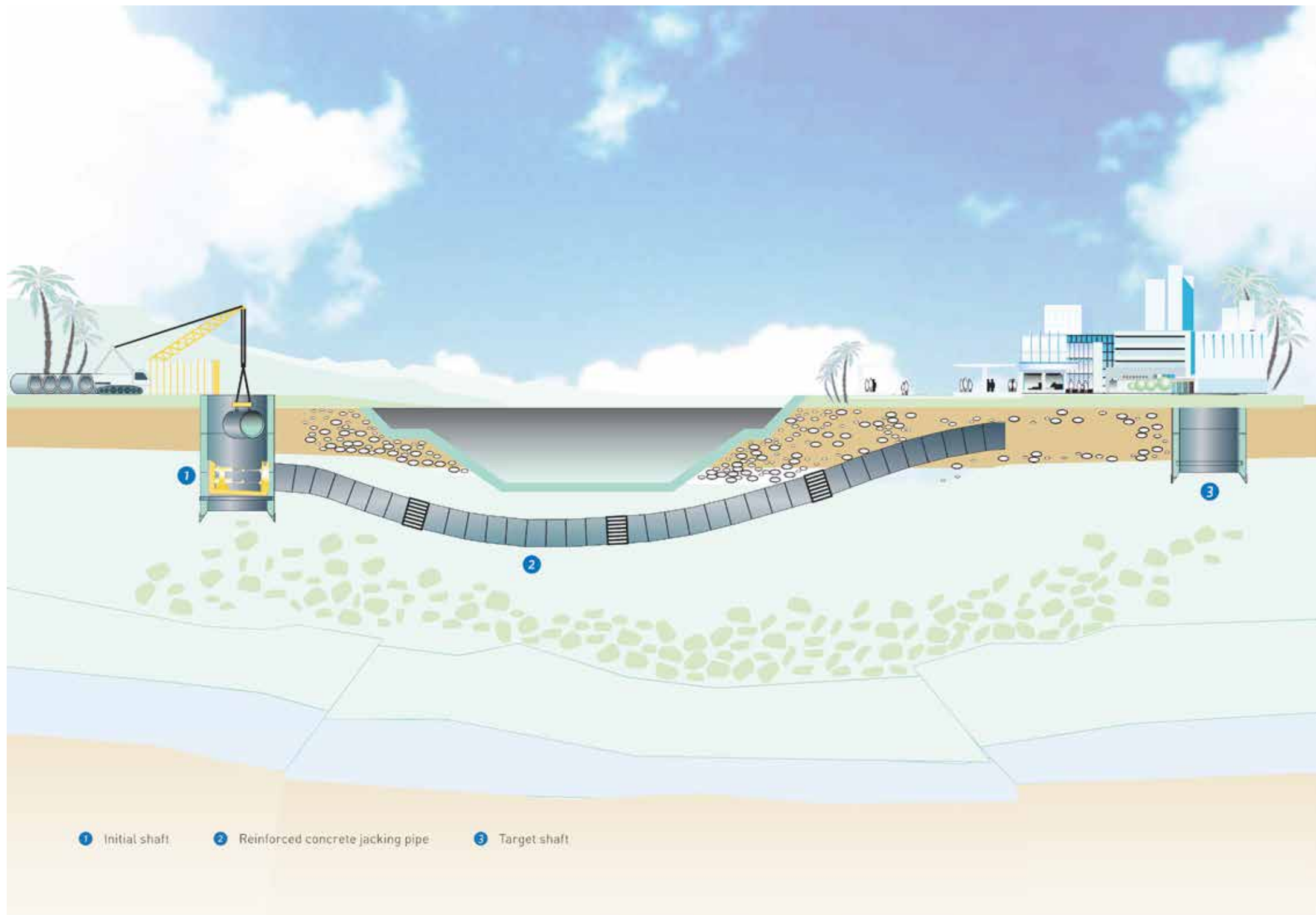
Use

The potential applications of our reinforced concrete jacking pipes are many and varied: they offer an optimal solution faced with natural obstacles such as rivers, lakes or mountains. They are also used where there are city centre complications such as building structures and commercial centres and road traffic, rail or airport-related transport constraints. They are also used as medium pipes (water transport), protective pipes for infrastructure pipes, pipelines or pedestrian access tunnels (e.g. escape tunnels).

Benefits

- Realistic definition of costs and timescales (in the case of microtunnelling/pipe Jacking)
- Construction work largely unaffected by the weather
- Virtually undisrupted overground activities
- Hardly any vibration and building noise
- Low emissions
- Virtually no impact on road traffic
- No lowering of the water table required
- Existing pipes can be easily circumvented
- Can be used irrespective of building density
- Minimal impact on the environment and existing structures
- Little spoil, meaning little requirement for disposal
- Can be used irrespective of building density





References: pipe technology

Spain, sea outfall pipe / foundation contractor

Project description: for sea water desalination
Technical data: ON 2000 / 2400
Jacking length approx. 1200 m
Special feature: 10 intermediate jacking stations

Sewage pipe / Berlin-Pankow, Hauptstrasse

Project description: Sewage pipe for the Berlin water utility company
Technical data: ON1000/1280 mm & DN1200/1490mm
Jacking length: 950.00 m
Special feature: with steel liners 16 bar internal pressure

River crossing in Parma, Italy

Project description: Production of jacking pipes for ICOP
Technical data: ON 1600 / 1940
Jacking length: 1425.00 m
Special feature: Installation of 10 intermediate jacking stations

Fraport AG, 60547 Frankfurt am Main North West runway; drain collector

Project description: Fraport airport
Technical data: ON1400/1720mm & DN1800/2160mm
Jacking lengths: 3500 m
Special feature: Traversing of runway

Cologne

Project description: Rhine crossing / Shell Connect
Technical data: DN 2000 / 2500
Jacking length: 2440.00
Special feature: External pressure: 3 bar



Munich, North West collector channel / 80995 Munich, Karlsfelder Strasse

Project description: Production of jacking pipes for a collector channel
Technical data: DN 3200 / 4100
Jacking length: 1500 m
Special feature: S-bend



Portugal, Mira

Project description: Fish farm with 2 fresh and waste water pipes apiece
Technical data: DN 2600 / 3300 & DN 3000 / 3800
Jacking length: 4 x 1500 m
Special feature: Field factory



Shaft technology: In-depht solutions

In-depth know-how

Our technical capabilities in shaft construction are virtually inexhaustible. We have systems for every soil type and develop shafts up to 100 metres deep - with a diameter of up to twelve metres. Both inside and out, the shafts are impermeable to 10 bar.

We provide our clients with competent project support and offer single source solutions: design, consulting and engineering. We also lease and sell the complete range of production equipment, built-in parts or tools.

Use

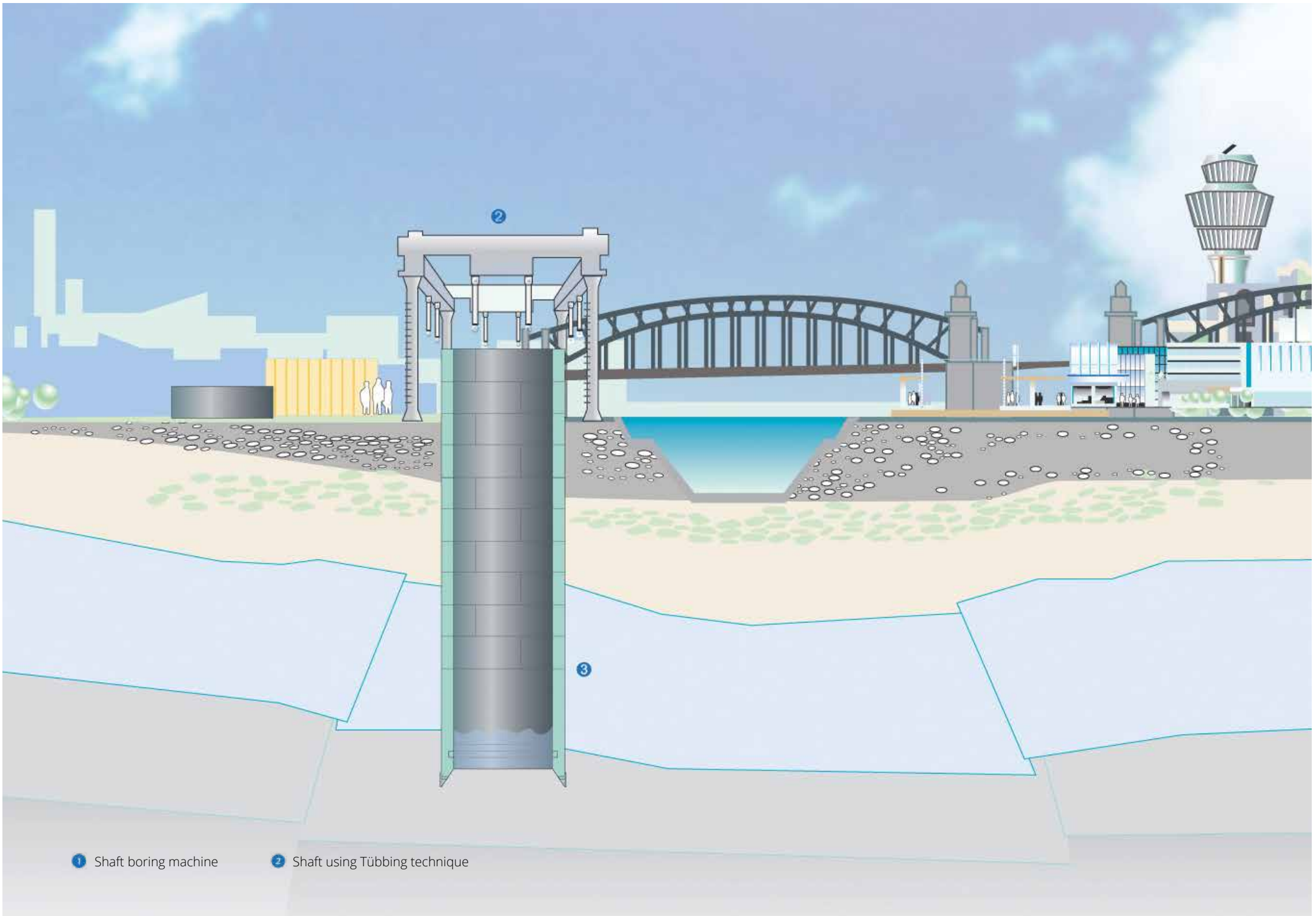
Our shaft technology is employed in ventilation shafts for transport tunnels or in escape shafts (for road tunnels, underground railways etc). We offer innovative „microtunnelling / pipe jacking project“ solutions for initial and target shafts.

This enclosed approach presents numerous advantages: these include no disruption to traffic, a low environmental impact and no inconvenience to local residents. Yet another important application area for our shaft technology is the sinking of connecting and inspection shafts for supply pipelines.

Benefits

- Cheaper than the conventional construction method at depths greater than 20 metres.
- Shorter building times means faster work progress
- Consistently high segment quality (because: prefabricated components in the prefabricated component factory, standardised work processes in production, easily manageable quality control)
- Increased building site safety
- Almost independent of weather conditions
- Use in the ground water





1 Shaft boring machine

2 Shaft using Tübbing technique

References: Shaft technology

Kuwait

Shaft: DN 8000 / DA 8800
Segments: 4 Tübbing segments
Shaft depth: up to 35.00m
Client/ principal: KBC Greenline

Naples / Italy

Shaft: DN 4500 / DA 5200
Segments: 3 Tübbing segments
Shaft depth: up to 45.00m
Client: Icop
Principal: Metro Napoli

Barcelona/ Spain

Shaft: DN 9000 / DA 9800
Segments: 4 Tübbing segments
Shaft depth: UTE la Sagrera
Client: ADIF
Special feature: Shaft depth to 65.00m

Seattle / Washington USA

Shaft: DN 9000 / DA 9800
Segments: 4 Tübbing segments
Shaft depth: 45.00m
Client: Herrenknecht AG
Principal: City of Seattle

St. Petersburg/ Russian Federation

Shaft:	DN 7700 / DA 8400	DN 5500 / DA 6200
Segments:	4 Tübbing segments	4 Tübbing segments
Client:	STIS	STIS
Principal:	Wodokanal SPB	Wodokanal SPB
Special feature:	Shaft depth to 85.00m	Shaft depth to 60.00m



Moscow / Russian Federation

Shaft: DN 7700 / DA 8400
Segments: 4 Tübbing segments
Client: Moscow Metro
Principal: Transingstroy
Special feature: Shaft depth to 85.00m



Emscher/ Germany

Shaft: DN 9000 / DA 9800
Segments: 4 Tübbing segments
Shaft depth: 25.00 m
Client: ARGE (Icop / Gollwitzer / Implenla)
Principal: Emscher Genossenschaft
Special feature: PE inliners for corrosion protection



Technology transfer: solutions for the future

Getting there together

We are there for our clients: from the first consultation to project completion and beyond. Because we support our partners with numerous services in the consulting- design - engineering arenas.

We also advise you in planning and developing pipe and shaft technologies. We train your employees in how to handle our technology and are happy to pass on our know-how.

If so desired, we also take on numerous project management and supervisory tasks: for example quality control, factory planning or logistics.

That is why our goal is to ensure your success in a project-related or long term partnership.

Consulting

Designing

Engineering

Know-how and technology transfer

Technical specification

Joint Venture

Technical assistance with development, manufacturing and installation

Static calculation of the pipes

Employee training

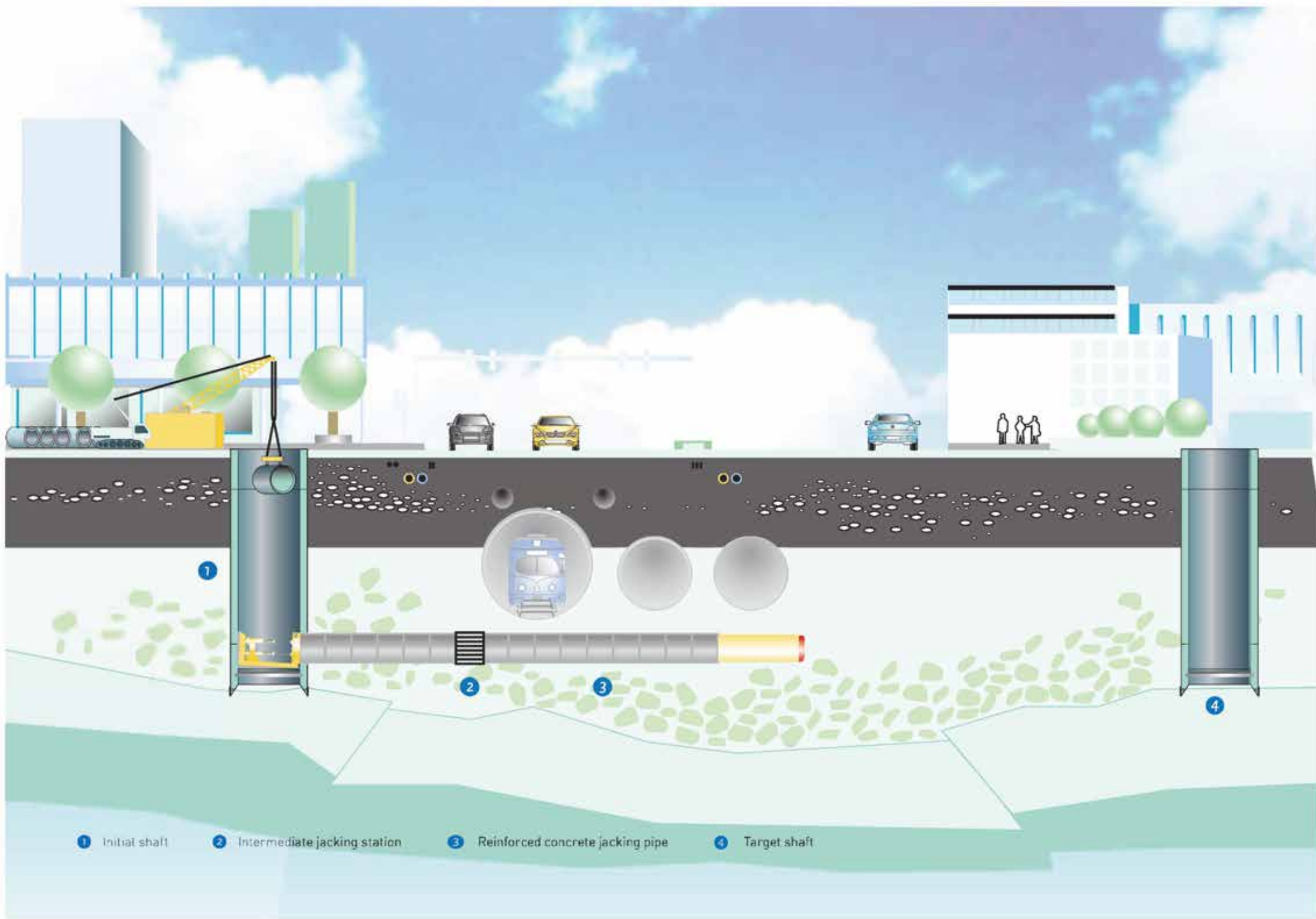
Support in the start-up phase

Supervising production

Quality control

Factory planning

Procurement of the means of production



References: Technology transfer

Thailand/ Bangkok

Description: DN 1200 & DN 1500 pipe production services Design
Services: Static calculation
Quality management
Sale of production equipment
Client: Concrete Products & Pipes Co.Ltd.
Special feature: Technology transfer & pipes with steel liners

Columbia / Medellin

Description: DN 1200 & DN 2200 & DN 2400 pipe production services
Services: Design
Static calculation
Supervising
Quality management
Client: Consorcio CICE
Special feature: Sale of production equipment

Australia/ Humes

Description: DN 1800 & DN 2100 pipe production services
Services: Design
Supervising
Client: Rinker Australia Pty. Limited
Special feature: Pipes with steel liners & technology transfer

Saudi Arabia / Jeddah

Description: DN 300- DN 3000 pipe production services Design
Services: Static calculation
Supervising
Quality management
Client: Abuljadayel Est. for Contracting & Maint
Special feature: Production facility planning

Hongkong

Description: ID 3000 OD 3600
Services: Design
Static Calculation
Supervising
Special feature: Connection of two motorway tunnels



Canada / USA / Ireland

Description: From ID 600 (OD860) to ID 3000 (3600)
Services: Design
Static Calculation
Supervising



Vietnam

Description: ID 2400 OD 3000
Services: Design
Static Calculation
Supervising
Special feature: Saigon River Crossing test pressure 17 bar



Special components: solutions for every eventuality

Special challenges demand special measures: We provide our clients with competent support, even when confronted with problematic soil conditions and difficult boring conditions.

To that end we have developed numerous special components such as the intermediate jacking station, the bentonite lubrication system or the composite steel-reinforced concrete pipe. These innovative technologies enable us to work when confronted with unfavourable soils or natural obstacles.

In especially difficult cases we support our customers in situ and jointly find solutions specially tailored to the specific boring conditions and requirements.

Intermediate jacking station

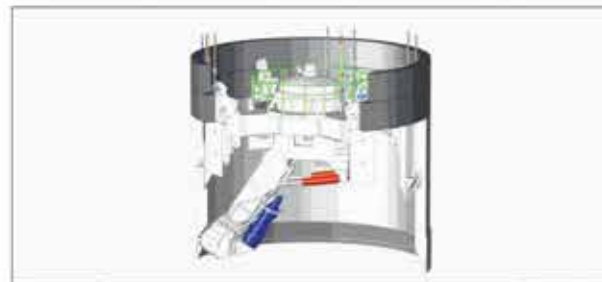
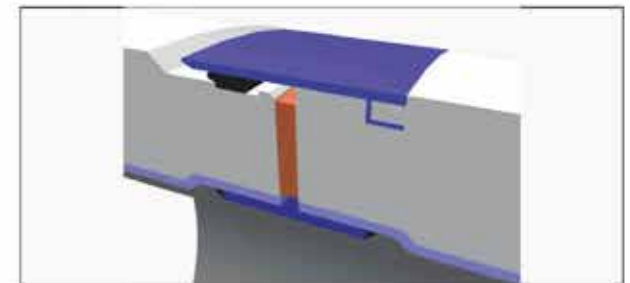
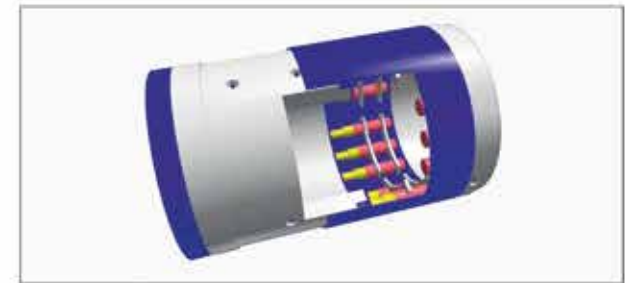
- Subdivision of the jacking distance subsections
- to extend Jacking distances

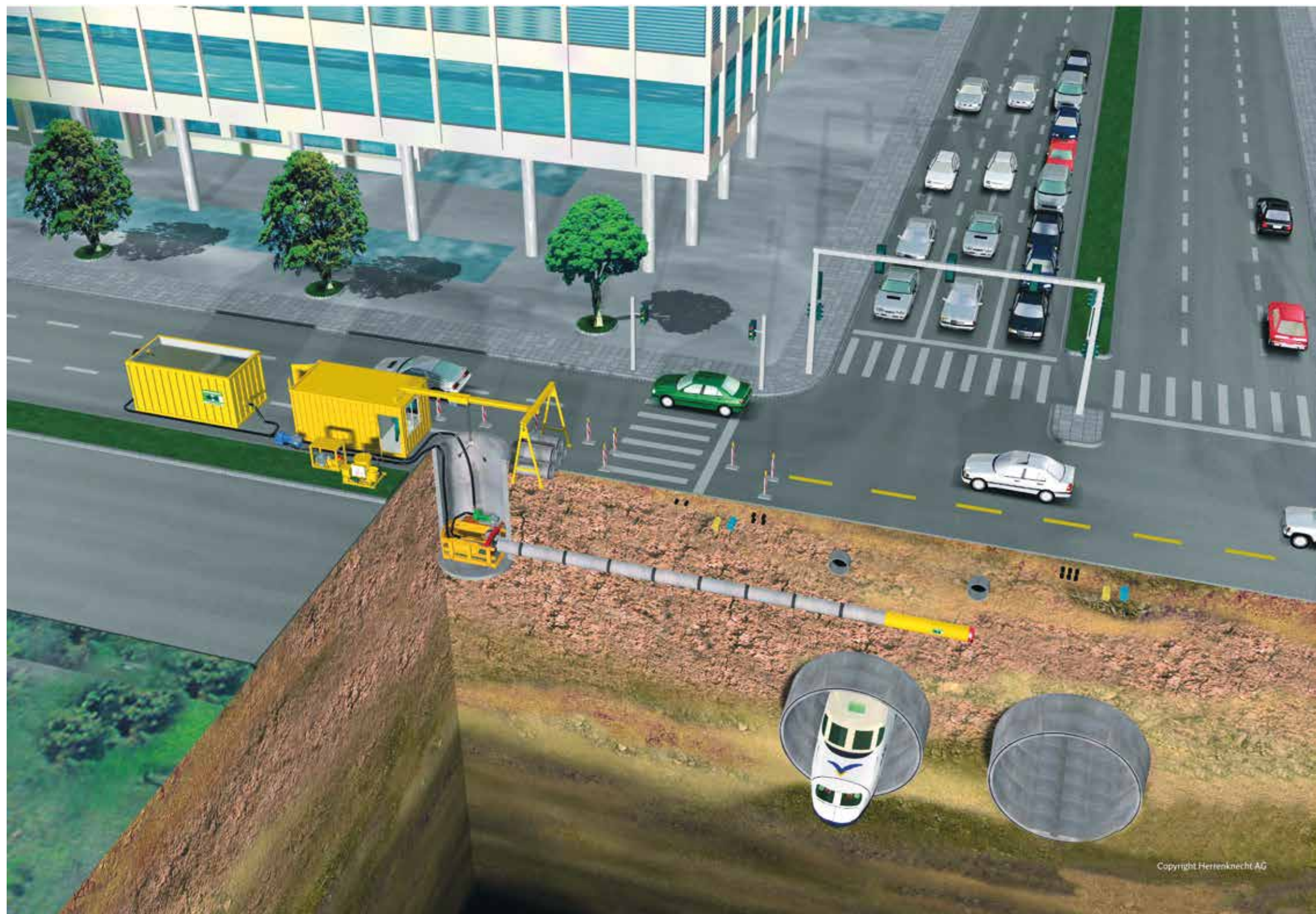
Bentonite lubrication system

- for introducing bentonite between the Jacking pipe and the surrounding earth
- to reduce frictional forces
- Bentonite as a lubricating and stabilising layer

Composite steel-reinforced concrete pipe

- as a combination of two pipe systems
- tensile resistant pipe section by welding the individual steel pipes
- use primarily in internally pressurised pipe systems





Solutions for the whole world

Gollwitzer international

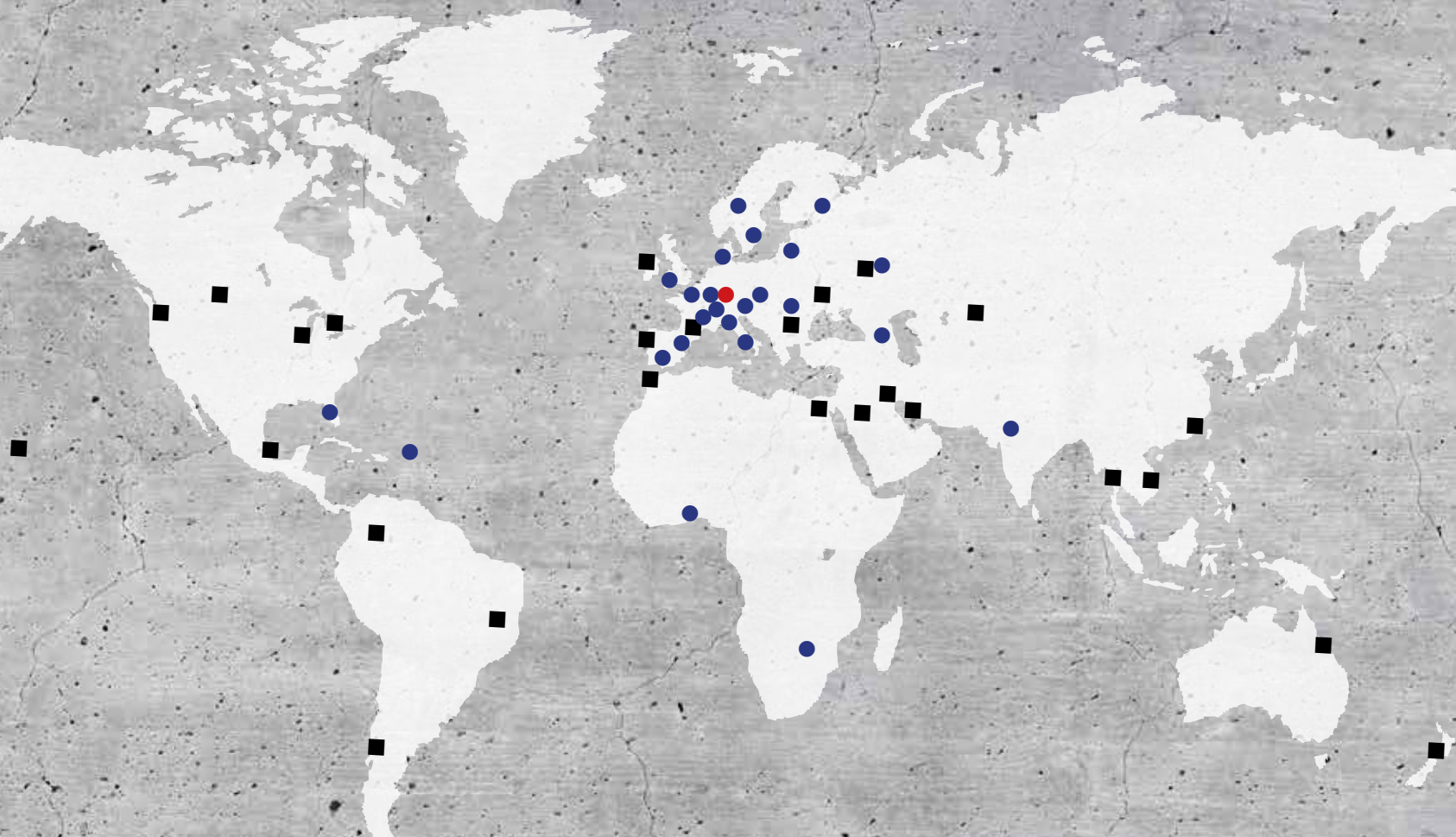
At home in Bavaria, successful throughout the world

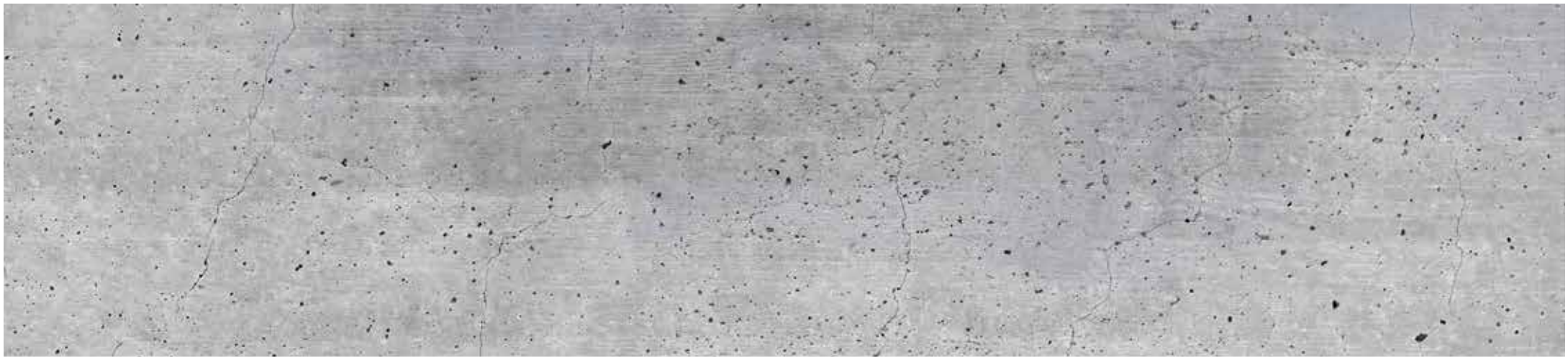
Based in Bavaria we, Gollwitzer GmbH, are known for our pipe and shaft systems far beyond the borders of Germany and Europe. Several thousand successful domestic projects and hundreds worldwide commend us as a successful partner.

We have been producing concrete pipes since 1966. Two years later we began to manufacture Jacking pipes, initially using the centrifugal casting system. In 1985 we revolutionised the manufacturing process with the wet and dry casting technique. Nowadays we produce reinforced concrete pipes in diameters from DN 300 to DN 3500 At the same time we were constantly adding numerous technical equipment and services to our range of services.

Today we can boast half a century of experience in pipe and shaft construction. And this is at the disposal of our clients worldwide: in the Metro Napoli, in the fresh and waste water pipes of Mira (Portugal) or in the Moscow Metro. Cladding for the entire world -we are proud of this little success story from the Upper Palatinate.

- Company headquarters
- Pipe and shaft technology projects
- Concrete pipe factory projects





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