

INNOVATION

Maccaferri has introduced the concepts of Factory 4.0 within the prefabrication process in order to minimize the cost and production time and, at the same time, improving the safety and traceability of the prefabricated elements. Within the working area operators can easily and safely move along platforms aligned with the machinery without the risks of falling or crushing thanks to engineered protective solutions.

Controlled concrete vibration, integrated mould opening, semi-automatic segment turning and traceability of segments, are just some of the innovations available to fulfill client requirements.

Furthermore, a patented integrated solution enables the segment tilting device to de-mould, to tilt and to transport the segment to the designed storage area from where it will be stacked automatically ensuring the horizontal and vertical alignment over the stacks, e.g. no intermediate steps are required, therefore, reducing the risk of segment damage and the number of operators required.

**Officine Maccaferri S.p.A.**

Via J.F. Kennedy, 10
40069 Zola Predosa (Bologna) - Italy

T: +(39) 051 643 6000

E: info@hq.maccaferri.com

maccaferri.com

Engineering a Better Solution

Maccaferri's motto is '**Engineering a Better Solution**'; We don't merely supply products, but work in partnership with our clients, offering technical expertise to deliver versatile, cost effective and environmentally sound solutions. We aim to build mutually beneficial relationships through the quality of our service and solutions.

GLOBAL ENGINEERS

In the second half of the 19th century we invented Gabions and dramatically changed civil engineering landscape. We are still changing today. We work every day to find better solutions for our clients at every degree of latitude and longitude. Our worldwide network grows through innovation and diversification of sectors of activity and through an increasing range of high quality and environmentally friendly products and applications.

OFFICINE MACCAFERRI GROUP PROFILE

Founded in 1879, our Group soon became a worldwide reference in the design and development of advanced solutions, with offices in over 70 countries and 30 factories worldwide.

Our mission is to pursue excellence through continuous improvement, while delivering to customers engineered solutions that are innovative, advanced and environmentally friendly. We are committed to outstanding safety, quality and sustainability, to create value for all stakeholders as well as our communities.

MACCAFERRI APPLICATIONS

 RETAINING WALLS
& SOIL REINFORCEMENT

 HYDRAULIC WORKS

 ROCKFALL PROTECTION
& SNOW BARRIERS

 EROSION CONTROL

 SOIL STABILIZATION
& PAVEMENTS

 BASAL REINFORCEMENT

 COASTAL PROTECTION,
MARINE STRUCTURES
& PIPELINE PROTECTION

 ENVIRONMENT,
DEWATERING & LANDFILLS

 DRAINAGE OF STRUCTURES

 TUNNELLING*

 LANDSCAPE
& ARCHITECTURE

 SAFETY & NOISE BARRIERS

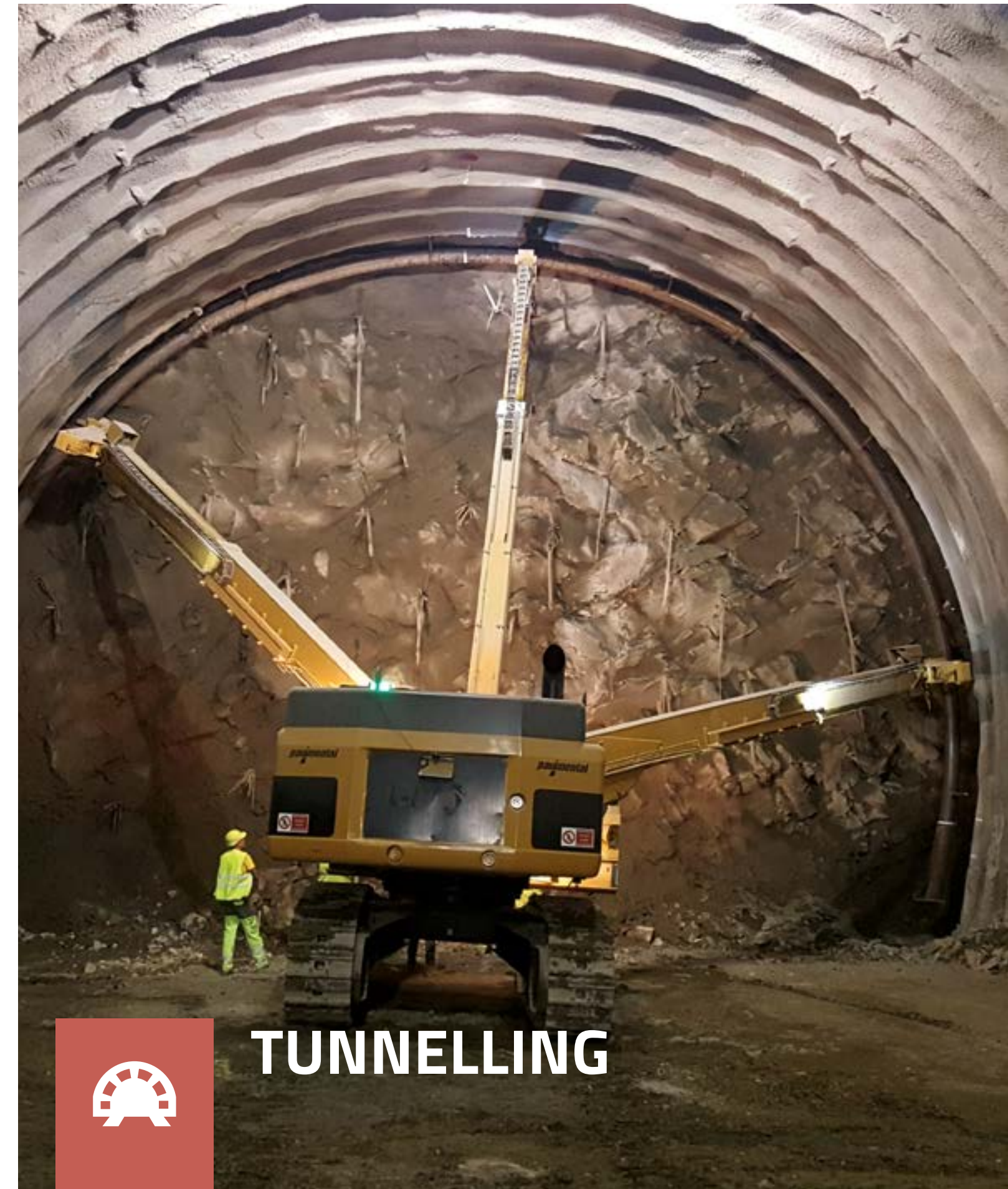
 FENCING & WIRE

 AQUACULTURE
NETS/CAGES

 CONCRETE FLOORING,
PRECAST & OTHER USES*

 INDUSTRIAL
MANUFACTURING

© Officine Maccaferri S.p.A.



TUNNELLING



TUNNELLING AT MACCAFERRI

Within underground construction, the engineering choices significantly influence the safety, quality, time and cost of the project. Addressing these issues in an effective way as early as possible reduces risks and maximizes the potential benefits to be gained.

Maccaferri provides innovative and state-of-the-art solutions for each stage of tunnelling construction, enabling the project team to not only identify, but overcome the challenges within the project.

Regardless of the excavation methodology and the environmental conditions, the goal is to provide temporary ground support which maintains the stability of the excavation and absorbs ground deformations, until the final lining is installed.



MACCAFERRI TUNNELLING SOLUTIONS

Advanced solutions

Our portfolio includes unique and innovative systems to address many aspects of underground support works, even those in the most challenging ground conditions.



Ground treatment and pre-consolidation

GFRP reinforcement

GFRP soil nailing is amongst the most effective methods of improving geotechnical characteristics and stabilizing the excavation. In the soil nailing the GFRP pipes are driven or grouted inside drilled boreholes and remain unstressed until the soil movements. Our patented GFRP products and associated deployment systems are adaptable to tackle different underground demands.

P.E.R. Ground System

The innovative P.E.R. Ground System has been engineered to address adverse and severe ground conditions. It is customizable to deliver combinations of strengthening, dissipation of water pore pressure and weathertightness. The product may be customized when used in core-consolidation face applications.

Reinforcement and Retention

GFRP reinforcement (concrete and soil reinforcement)

Concrete retaining walls using GFRP as a temporary reinforcement are used worldwide, especially at tunnel portals or breakthroughs. Our patented GFRP products provide enhanced performance and strength, better cuttability and are fully customizable.



Tunnel support system

B.ZERO Tondo™

Our tubular semi-automatic steel rib together with its dedicated automated erector machine, has been engineered to meet the construction demand for a more effective, easier to install and safer solution than the conventional open profile steel ribs. Compared to conventional primary supports, the structural efficiency of the system delivers a higher performance and a shorter installation time.



Precast Yard for Concrete Segmental lining

Maccaferri and its partner CP Technology are amongst the few companies in the market with the ability to deliver a turnkey prefabrication plant combining innovation in design and manufacturing processes to deliver optimized production processes: more efficiency, enhanced safety and increased cost-effectiveness. Maccaferri and CP Technology, renowned as specialists in mould and carousel systems, were selected for the supply of precast concrete segments for the Santa Lucia Tunnel Project (Milan – Naples Highway), where the largest Tunnelling Boring Machine (TBM), ever used in Europe, was deployed for the excavation of the 15.87 m diameter tunnel.



Where we work

Maccaferri has manufacturing facilities in more than 30 countries sales in over 100. You are never far from our engineering support and product availability.

