

DOLENCO DRAIN FOR TUNNELS

Building a Safe and Sustainable Future



Build your tunnel safe, by permanently preventing pressure.

All parts of the Dolenco Drain Solution with the permanent sprayed concrete lining have a 120 year design life.

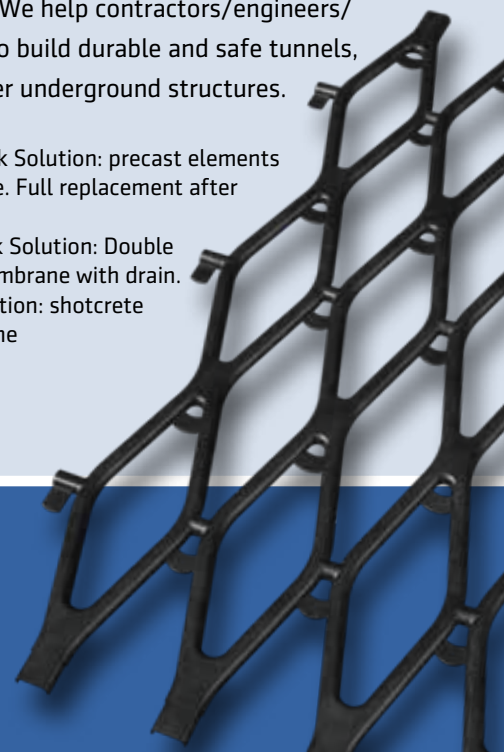
By choosing a sustainable and technically safe solution for your tunnel, you not only achieve a tunnel lining that is permanently without pressure. The permanent lifespan of the Dolenco Drain also saves all the disruption associated with replacing the precast elements at the end of their 50 year lifespan. And saving ca 60 cm on the air gap behind the inner elements, reduces the excavated cross-section by 15%.

The use of Dolenco Drain facilitates the use of spray membranes.

Not only does choosing Dolenco Drain reduce the cost, time and CO₂ significantly, but it also has additional benefits such as simplifying construction, a longer design life and lower maintenance.

Dolenco Drain works on UN goal 9 and 12 on sustainable infrastructure: We help contractors/engineers/owners, who want to build durable and safe tunnels, basements and other underground structures.

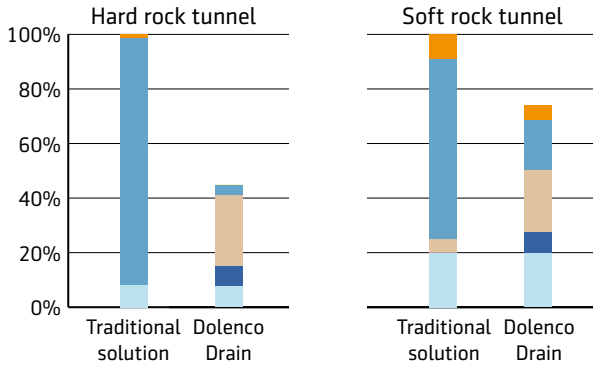
- Standard Hard Rock Solution: precast elements and PVC membrane. Full replacement after 50 years.
- Standard Soft Rock Solution: Double Lining and PVC membrane with drain.
- Dolenco Drain Solution: shotcrete and spray membrane (SAWM).



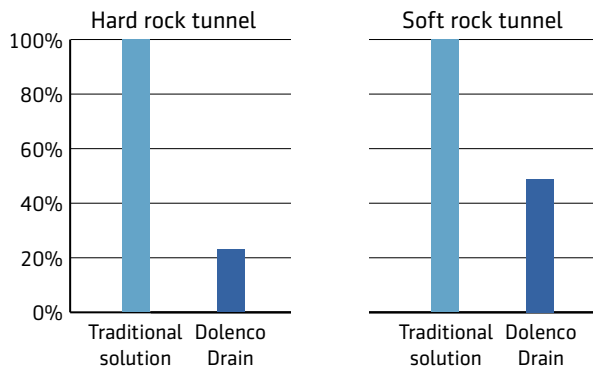
How much can you save?

When comparing Dolenco Drain/spray membrane to elements/PVC membrane, the construction cost is reduced by 26-52% and time savings are 50-77%. The Dolenco Drain Solution saves at least 30-44% CO₂ over a service life of 120 years. The savings are higher if including the 60 cm reduction of excavation.

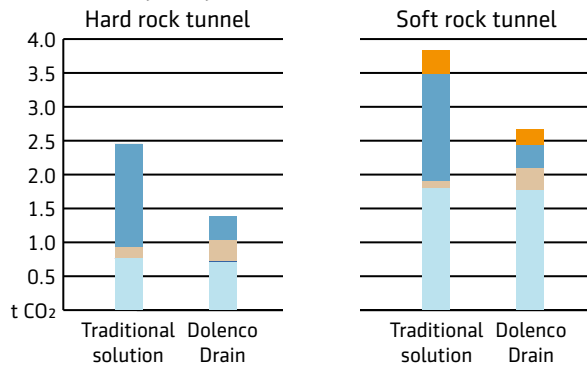
Construction cost:



Construction time:



Carbon footprint per 1,000 m²:



ADVANTAGES OF DOLENCO DRAIN FOR TUNNELS

- Prevents pressure on lining
- Once installed, Dolenco Drain is a permanent solution
- Suitable for both new and existing structures
- The slim and monolithic design can be installed with very little space available
- Quick and safe repair of concrete after physical damage, requiring minimal downtime of tunnel
- The modules are made from recycled material
- Low LCC makes it very cost-effective
- Reduces embodied CO₂

