

Project

The West Gate Tunnel is an approximately 5 km long twin-tube tunnel that will connect the West Gate Freeway to the Port of Melbourne via the suburb of Yarraville. The project aims to provide an alternative to the West Gate Bridge, making travel through the area faster and safer and removing heavy traffic from the Inner West residential area of Melbourne. Construction started in 2018 and will be completed in 2022.

In 2018, Euroform was awarded the supply of the formwork system for casting the corbels supporting the precast concrete slabs of both the road deck and the smoke duct deck, two different types of service gantries, and the gantries for placing the slabs on the corbels. In 2020, a further two gantries will be added to the existing equipment for the installation of the utilities.

The scope of supply includes

- 2 service gantries for transporting the scabbling and drilling units to prepare the base for casting the corbels.
- 2 service gantries for transporting and placing the rebars.
- 2 formwork systems for casting of corbels gantries for the transport and positioning of the formwork for the corbels and the concrete distributor.
- 2 gantries for transporting, handling, and placing the various service pipes.
- 2 gantries for placing the precast concrete slabs

All gantries are self-propelled.

The corbels are cast on both sides of the tunnel in 24 m long longitudinal sections and directly on the intrados surface of the tunnel lining made of precast concrete segments previously installed by the TBM.

All the service and formwork gantries are equipped with four sliding feet that allow the machines to be moved directly on the tunnel lining segments. All movements are performed by hydraulic actuators. The gantries for transporting and placing the rebars are equipped with a system of cranes and trolleys for handling and placing the rebars.

The gantries carrying the formwork simultaneously transport the form for casting the lower corbels and the form for casting the upper corbels. All movements of the gantry and formwork are radio controlled. A concrete distributor located on the upper level of the machine pours concrete on both sides of the entire formwork system through an articulated pipe system.

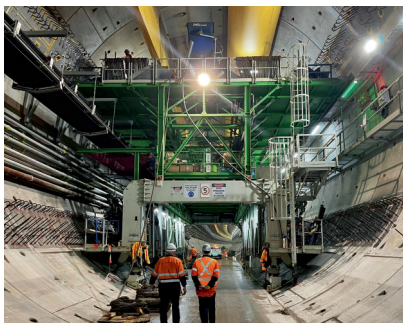
The pipe installation gantries are each equipped with three gantry cranes and two jib cranes to handle and install the supports, drain pipes, drain flame trap assemblies, riser main pipes, fire main pipes, and electrical cable trays. Each gantry is fitted with high-resistance polyurethane steering wheels and moves directly on the invert laid at the bottom of the tunnel. The gantries are supplied with decks for storing the material to be laid, with a capacity of 32 tonnes.

The slab installation gantries run on their own tracks positioned on the lower corbels. The gantries are equipped with a boom with a winch that picks up, moves, and positions the slabs on the previously cast corbels.

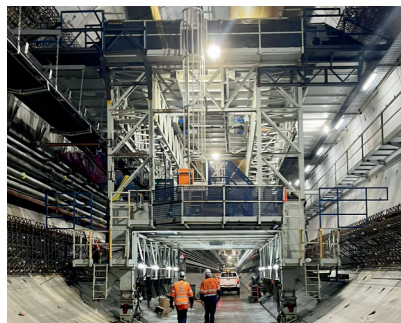
CLIENT

Herrenknecht Australia Pty Ltd

Scabbling and drilling gantry



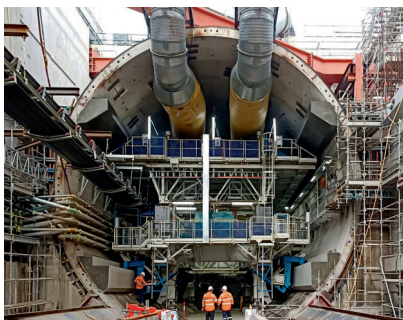
Rebar installation gantry



Concrete distributor



Formwork for lower and upper corbel casting



Pipe installation gantry



Slab installation gantry

