



PROJECTS

UNDERGROUND
MACHINERY



OSTROJ

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By combining tradition, precision craftsmanship, and modern technology, we create reliable engineering solutions of world-class quality.



The foundation stone of OSTROJ was laid in Opava in August 1948. However, our company's history reaches much further back. Two key milestones define our heritage: 1873, when the Elbertzhagen & Glassner engineering works was founded in Ostrava, and 1878, when Eduard Tatzel, a native of Bruntál, established the Opava Engineering Works and Foundry. The merger of these two companies gave birth to OSTROJ.

In the 1950s and 1960s, the enterprise built upon this rich industrial tradition, becoming a pivotal hub for the development and production of underground coal mining equipment. Today, after more than 75 years, we continue to innovate. Combining traditional know-how with state-of-the-art technology, we design and manufacture conveyor systems that set the standard in production automation.

Thanks to decades of experience in mining and underground construction, along with our expert team, we deliver technical solutions built to withstand even the most demanding conditions.

OSTROJ mining and industrial technologies operate daily not only in the Czech Republic but also in the United States, Mexico, Poland, Turkey, Spain, Colombia, Ukraine, and Australia.





SKANSKA

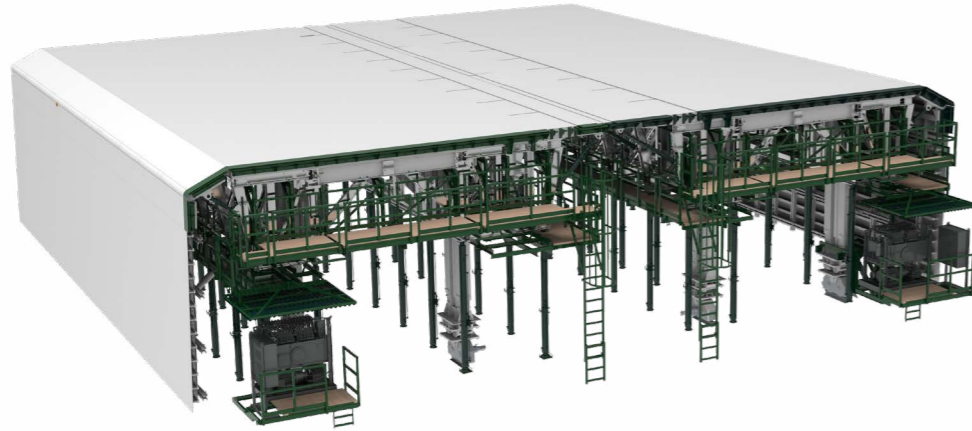
CUT AND COVER FORMWORK

SKANSKA

CUT AND COVER FORMWORK

For the construction company Skanska, we designed and manufactured a special mobile formwork structure for the concreting of a 400-meter road tunnel near Oslo, Norway.

The formwork was designed to allow smooth movement as a compact unit, which accelerates the concreting of individual tunnel blocks with a rectangular profile, often used in urban areas for elevated transportation.



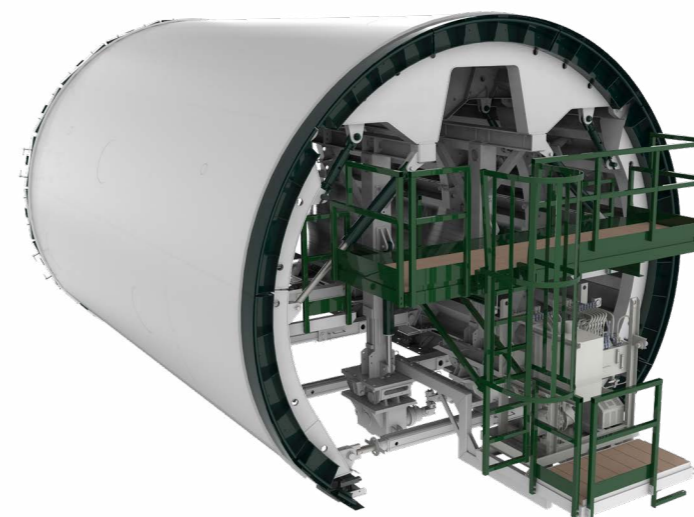
Designed for	road tunnel
Place of deployment	Oslo, Norway
Date of deployment on site	6/ 2024 - 12/ 2026
Appr. weight	2 carriages x 150 tonnes
Length	2 carriages x (20x10m)



TUNNEL FORMWORK CARRIAGE

For the construction company HOCHTIEF CZ, we designed and manufactured a mobile formwork system for casting the secondary lining of one line tunnels on the new Metro Line D in Prague. This equipment was a key element in the tunnel shell construction between Pankrác and Olbrachtova stations during the first phase of the project.

The formwork system was engineered to enable efficient and precise shaping of tunnel structures, helping to accelerate construction while ensuring top-quality results.

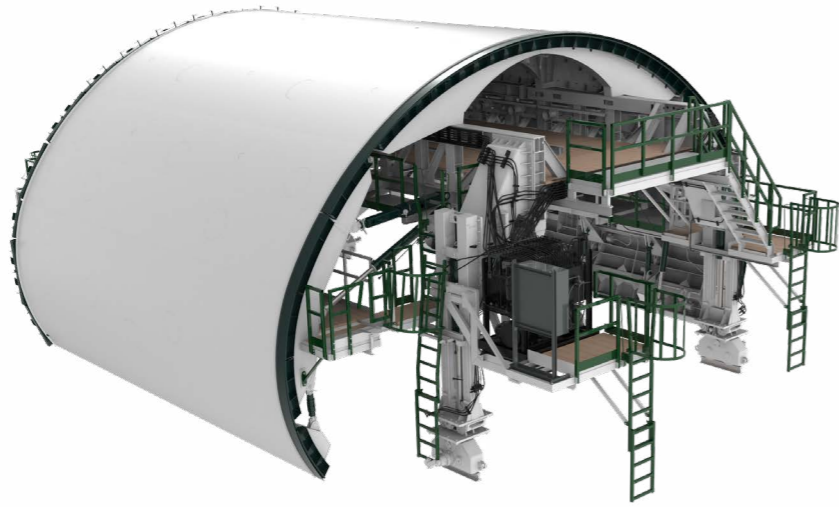


Designed for	one track tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	6/ 2024 - 7/ 2025
Appr. weight	40 tonnes
Length	8 m

TUNNEL FORMWORK CARRIAGE

For the Prague Metro Line D extension, we provided HOCHTIEF CZ with custom mobile formwork designed for secondary lining operations.

Used on the Pankrác–Olbrachtova section, the system enabled high-speed, precise casting of the twin-tube tunnels, significantly enhancing construction efficiency and final lining quality.



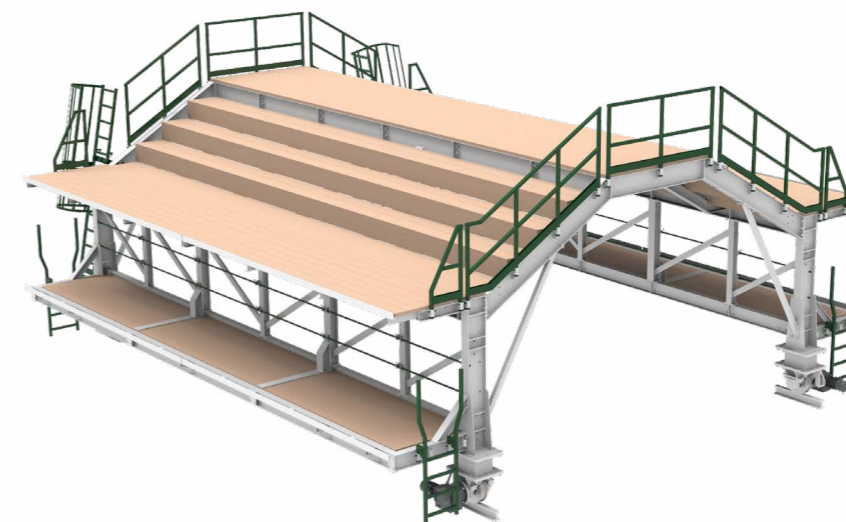
Designed for	double track tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	11/ 2024 - 3/ 2026
Appr. weight	110 tonnes
Length	10 (12) m



TUNNEL REINFORCEMENT CARRIAGE

For the construction company HOCHTIEF CZ, we designed and manufactured a reinforcement carriage for the secondary lining of two line tunnels on the new Metro Line D in Prague.

This equipment was a key element in the tunnel shell construction between Pankrác and Olbrachtova stations during the first phase of the project.



Designed for	double track tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	9/ 2024 - 3/ 2026
Appr. weight	21 tonnes
Length	12 m



STRABAG

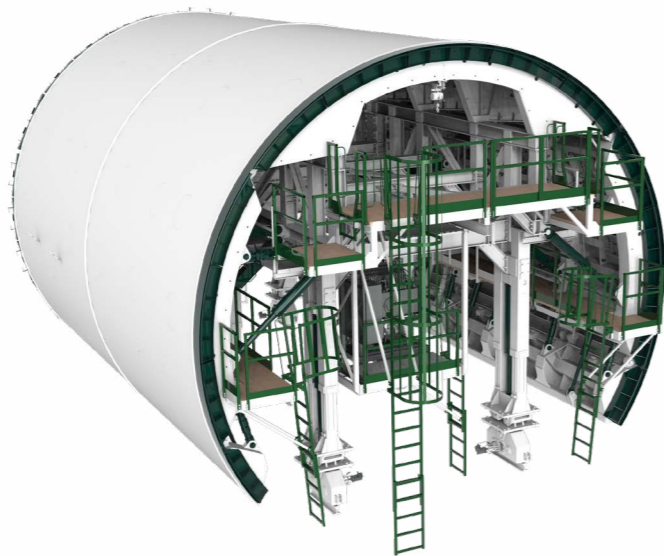
TUNNEL FORMWORK CARRIAGE

STRABAG

TUNNEL FORMWORK CARRIAGE

For the construction company STRABAG, we supplied mobile formwork equipment that enables the concreting of tunnel linings.

The special design, consisting of two connected units, provides flexibility – they can be used together in a length of 12 meters or separately in 6-meter sections.



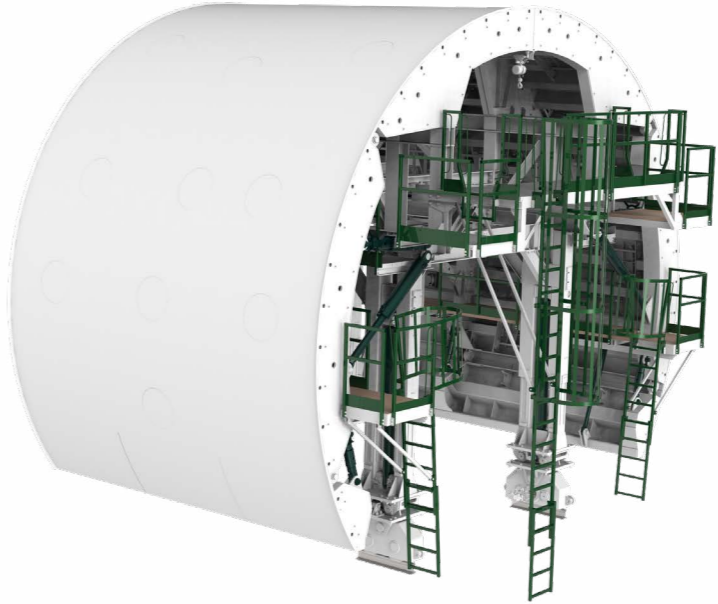
Designed for	station tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	10/ 2024 - 7/ 2025
Appr. weight	2 x 55 tonnes, Wagon Nr. 1 - 2x
Length	6 (12) m



TUNNEL FORMWORK CARRIAGE

Split formwork was used for tunnel formwork, and we supplied it to STRABAG.

This formwork allows for the independent operation of two 6-meter carriages or the independent operation of just one of the two carriages, which can also facilitate work in curved tunnels.

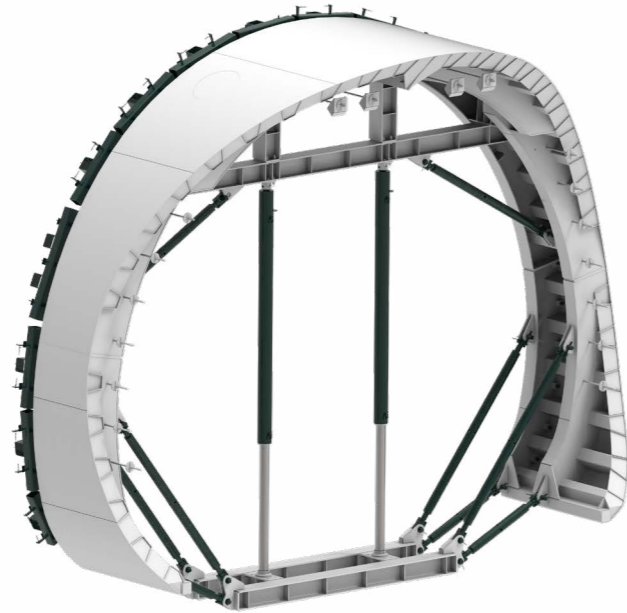


Designed for	Neck
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	12/ 2024 - 7/ 2025
Aprr. weight	55 tonnes

TUNNEL FORMWORK CARRIAGE

We supplied STRABAG with neck formwork for the connecting passages between tunnels, in addition to the segmental formwork. The neck formwork is unique in that it is supported by a hydraulic prop, which can be raised during construction.

The neck formwork is used exclusively in conjunction with the main formwork. It is connected to the main formwork using tie rods.



Designed for	formwork - divide
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	12/ 2024 - 7/ 2025
Appr. weight	approx. 5 tonnes



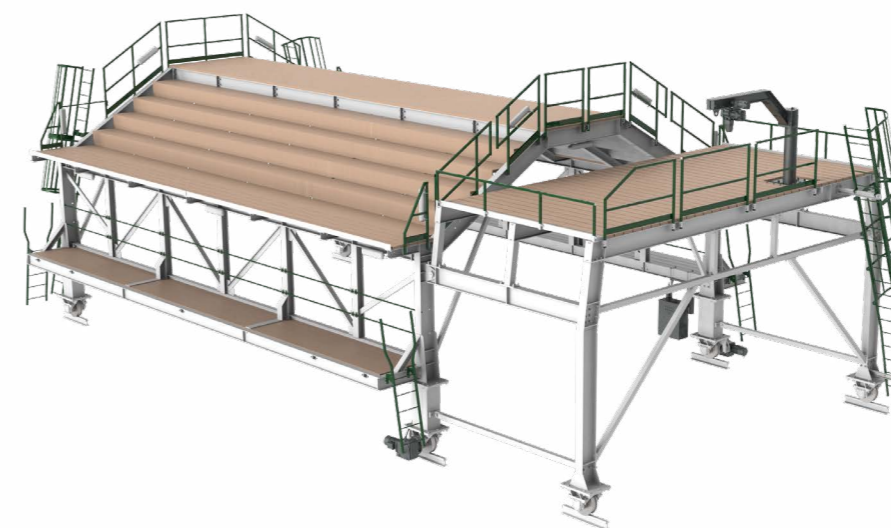
**TUNNEL FORMWORK
AND REINFORCEMENT CARRIAGE**



TUNNEL REINFORCEMENT CARRIAGE

For the construction company MARTI, we designed and manufactured a reinforcement carriage for the Homole tunnels on the D35 highway.

The formwork system was engineered to enable efficient and precise shaping of tunnel structures, helping to accelerate construction while ensuring top-quality results. This particular formworks is also equipped with remote controller to provide smooth operation.



Designed for	double track tunnel
Place of deployment	Homole Tunnel, D35 highway, Czech Republic
Date of deployment on site	9/ 2025 - 4/ 2026
Appr. weight	21 tonnes

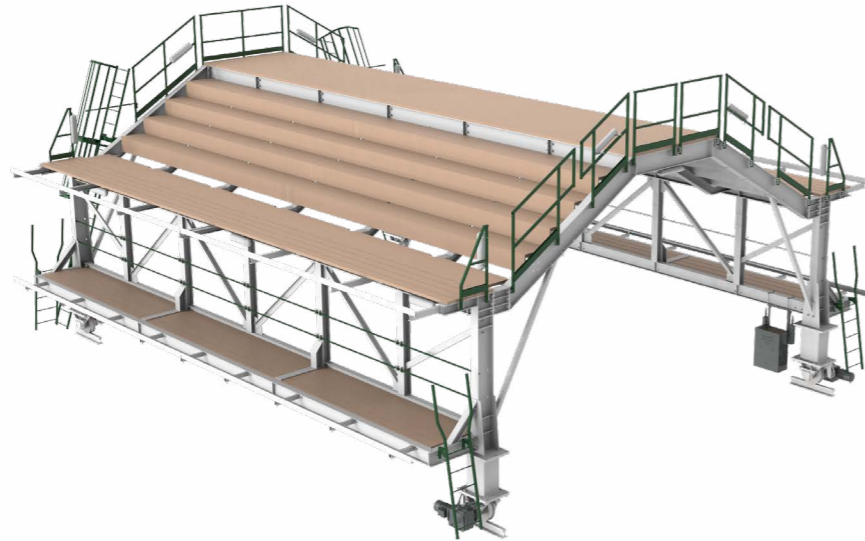




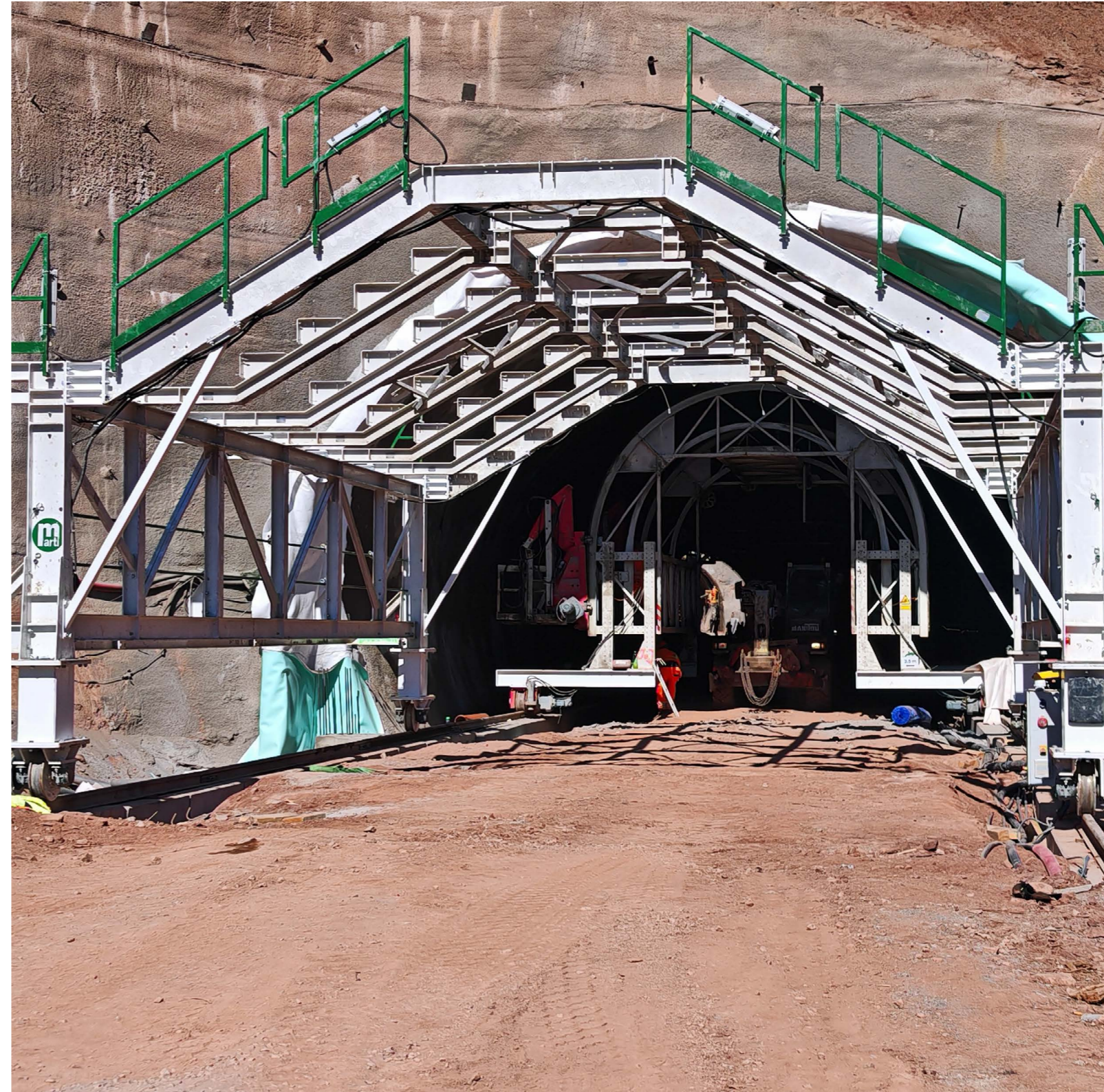
TUNNEL REINFORCEMENT CARRIAGE

For the construction company MARTI, we designed and manufactured a reinforcement carriage for the Dolní Radechová tunnels on the I33 Náchod bypass. The formwork system was designed to enable efficient and precise shaping of tunnel structures, which helps to speed up construction while ensuring top-notch results.

This particular reinforcement carriage was recast from the original reinforcement carriage from the HOMOLE tunnel. It is also equipped with a remote control to ensure smooth operation.



Designed for	double track tunnel
Place of deployment	Dolní Radechová, I/33 Náchod Bypass
Date of deployment on site	from 6/ 2026
Appr. weight	21 tonnes

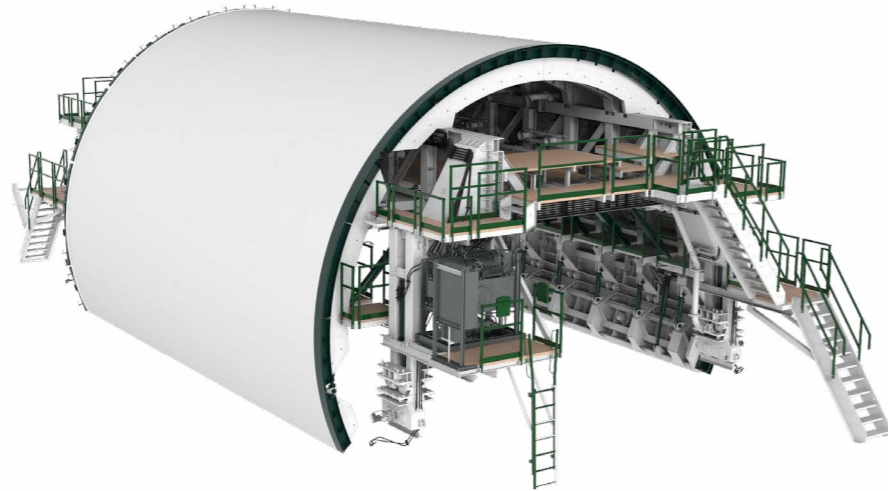




TUNNEL FORMWORK CARRIAGE

For the construction company MARTI, we designed and manufactured a mobile formwork system for casting the secondary lining in the Homole tunnel on the D35 highway.

The formwork system was engineered to enable efficient and precise shaping of tunnel structures, helping to accelerate construction while ensuring top-quality results. This particular formwork is also equipped with remote controller to provide smooth operation.



Designed for	double track tunnel
Place of deployment	Homole Tunnel, D35 highway, Czech Republic
Date of deployment on site	10/ 2025 - 7/ 2026
Appr. weight	125 tonnes
Length	12,5 m



TUNNEL FORMWORK CARRIAGE

The Neck, SOS, PV, and CV niches were delivered for the formwork of the Homole Tunnel.

All of these structural elements are attached to the tunnel lining using tie rods and are used at specific stages of construction as required by the tunnel.



Designed for	double track tunnel
Place of deployment	Homole Tunnel, D35 highway, Czech Republic
Date of deployment on site	10/ 2025 - 7/ 2026



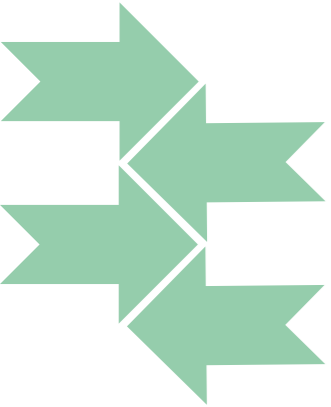
STRABAG

TUNNEL FORMWORK CARRIAGE

LIFECYCLE OF ESCALATOR TUNNEL

For the escalator tunnel of the Prague metro, we developed and delivered equipment for reinforcement and concreting at a 30-degree angle.

The entire delivery was carried out in several stages, and compared to other solutions, the customer especially appreciated the unique design and the self-supporting structure of the concreting carriage.



Designed for	escalator tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	10/ 2025 - 5/ 2026
Appr. weight	4 - 45 tonnes
Length	6 m

TUNNEL FORMWORK CARRIAGE

As a zero phase, a handling platform was delivered, which provides for the delivery of material to the escalator tunnel.

The equipment moves on rails and is pulled by winches, which are supplied by the construction company. This tunnel cart has a total load capacity of 4 tons.

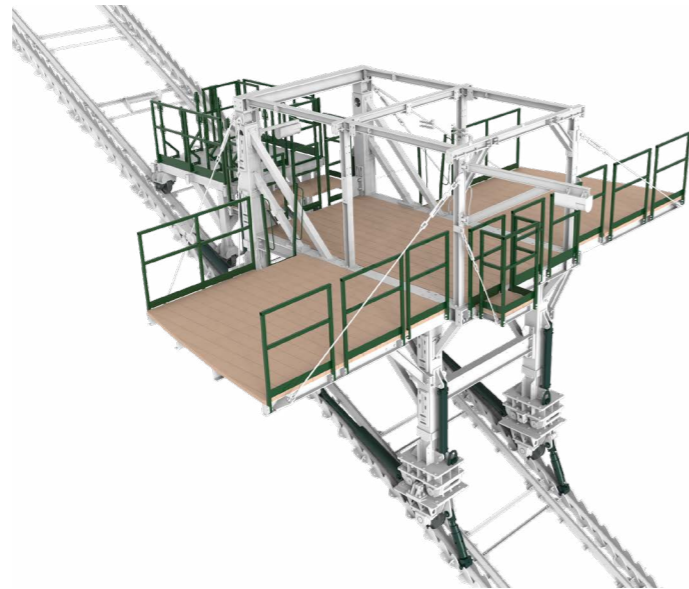


Designed for	escalator tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	10/ 2025 - 5/ 2026
Appr. weight	4 tonnes

TUNNEL CART FOR INCLINED TRANSPORT PHASE 1

This equipment was delivered as the first phase of the escalator project. It was used to install insulation and create reinforcement for the escalator landings. The equipment is self-propelled and moves along special rails, which are included in the delivery.

The entire unit is subsequently secured using mechanical struts that hold the unit in place. This rail system is used for all four phases of the escalator.



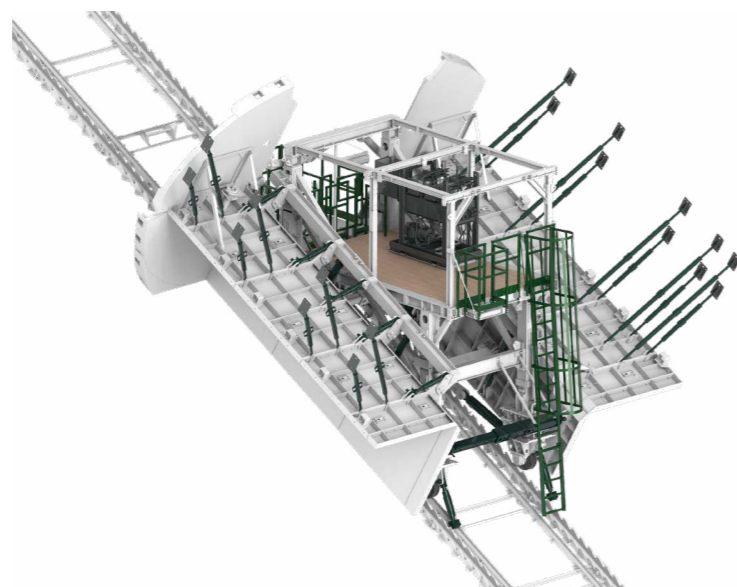
Designed for	escalator tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	11/ 2025 - 12/ 2025
Appr. weight	11 tonnes



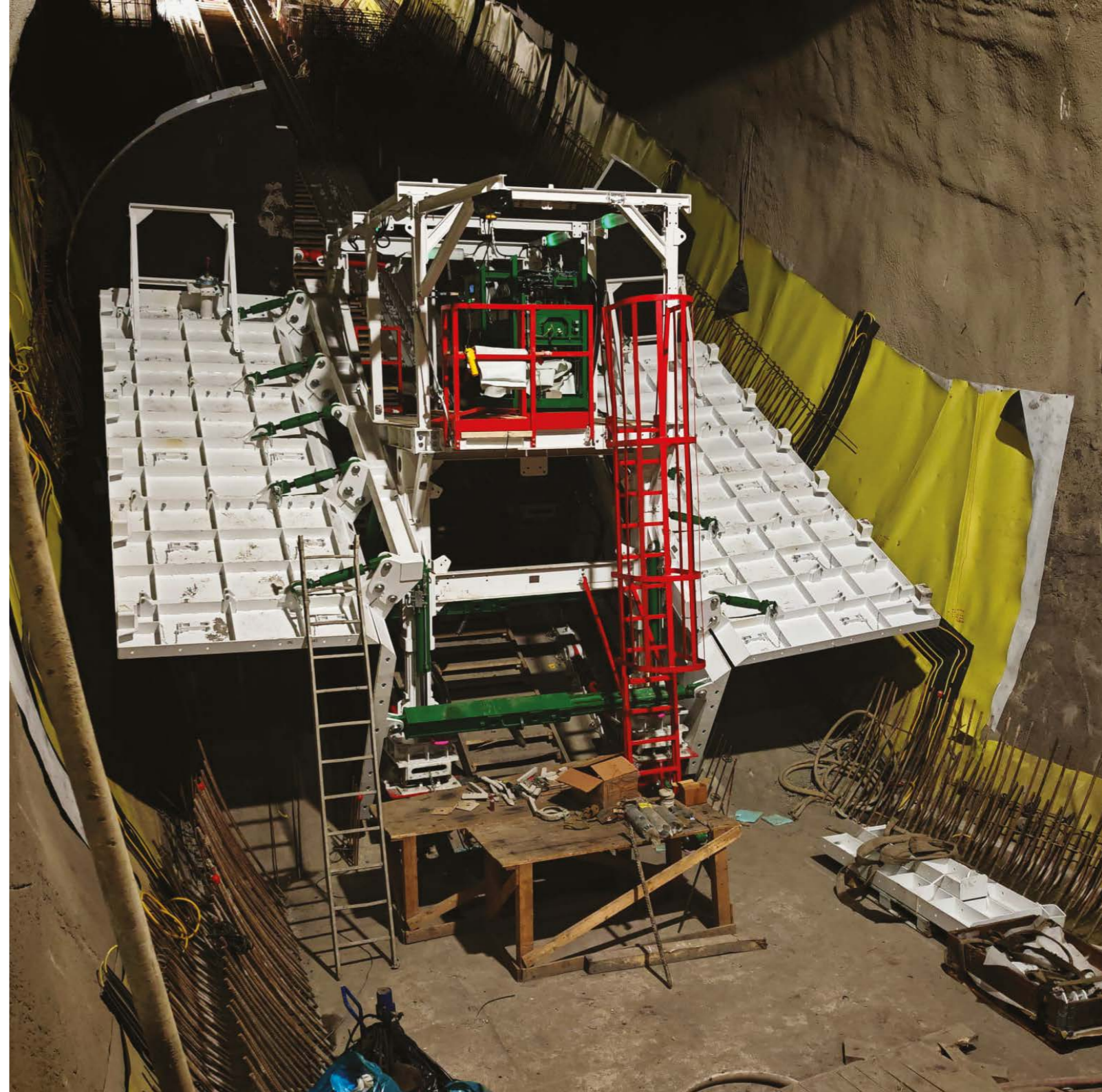
TUNNEL FORMWORK CARRIAGE PHASE 2

In Phase 2 of the escalator tunnel, formwork is used for casting the side walls. All work involved in setting up and installing the formwork is performed using a hydraulic system.

The formwork is subsequently secured using mechanical props. As mentioned in Phase 1, the entire system is self-propelled.



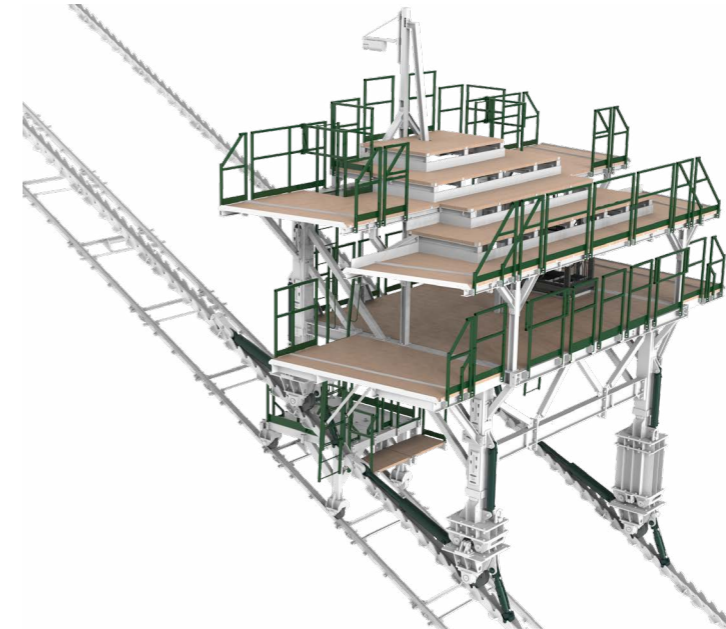
Designed for	escalator tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	12/ 2025 - 2/ 2026
Appr. weight	21 tonnes
Length	6 m



TUNNEL FORMWORK CARRIAGE PHASE 3

The third phase of the escalator tunnel involved moving the tracks from the lower section to the shoulder area.

The first stage of this third phase consisted of laying insulation, followed by installing the reinforcement for the tunnel's secondary lining.



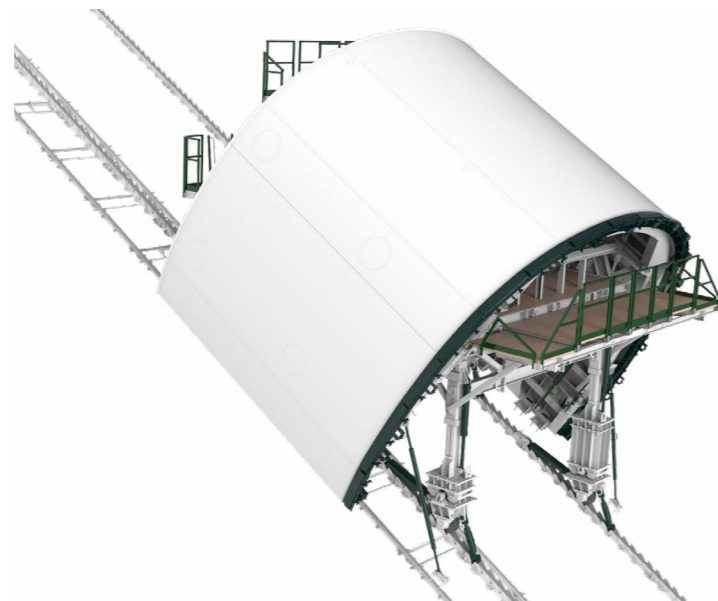
Designed for	escalator tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	2/ 2026 - 3/ 2026
Appr. weight	17 tonnes
Length	6 m



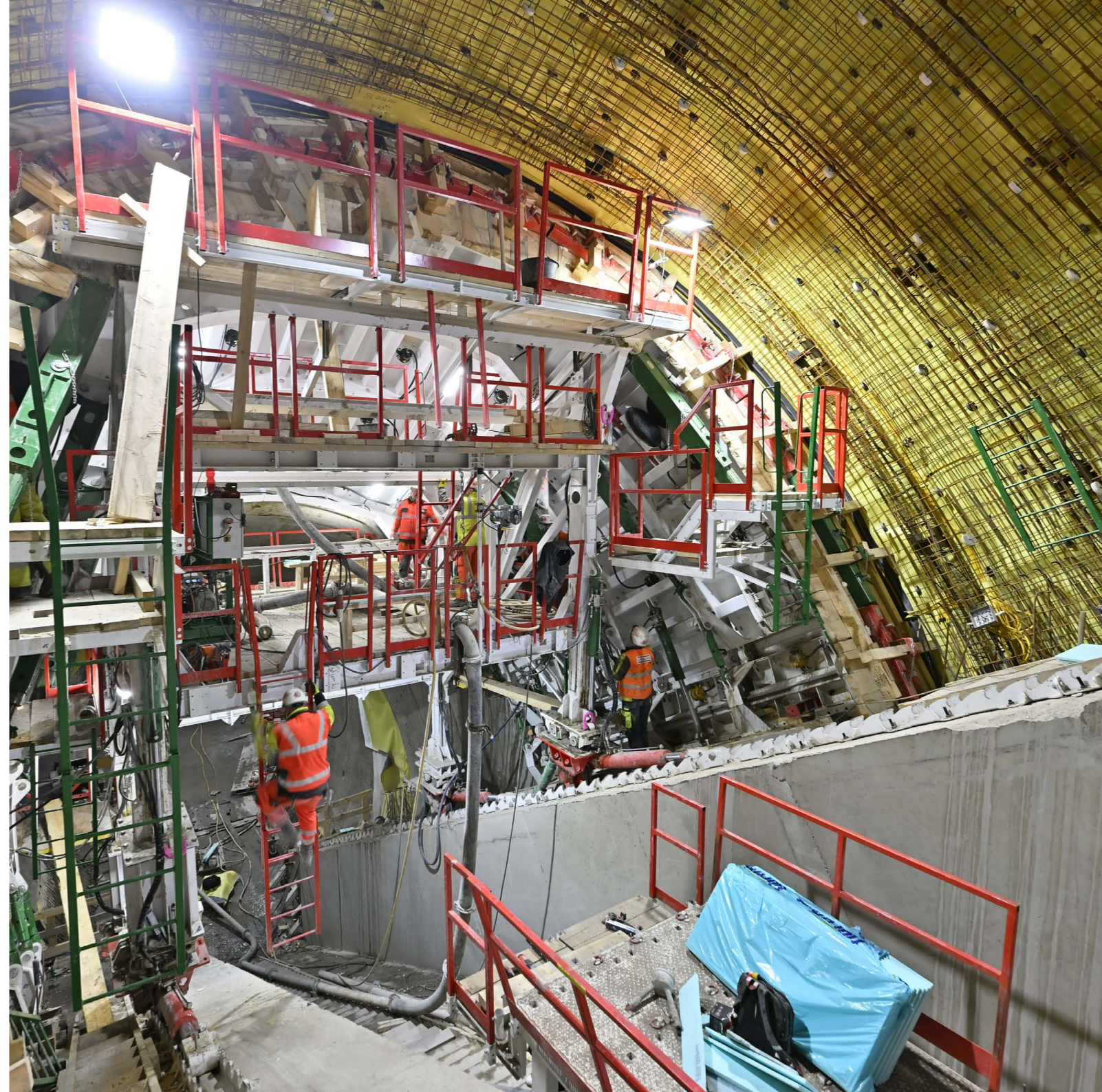
TUNNEL FORMWORK CARRIAGE PHASE 4

The final, fourth phase of the escalator tunnel involved the installation of the secondary lining. This was the most challenging phase, so the full power of all four climbing cylinders was utilized.

As in the second phase, the entire formwork was positioned using hydraulic cylinders and then secured with mechanical struts.



Designed for	escalator tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	3/ 2026 - 5/ 2026
Appr. weight	45 tonnes
Length	6 m

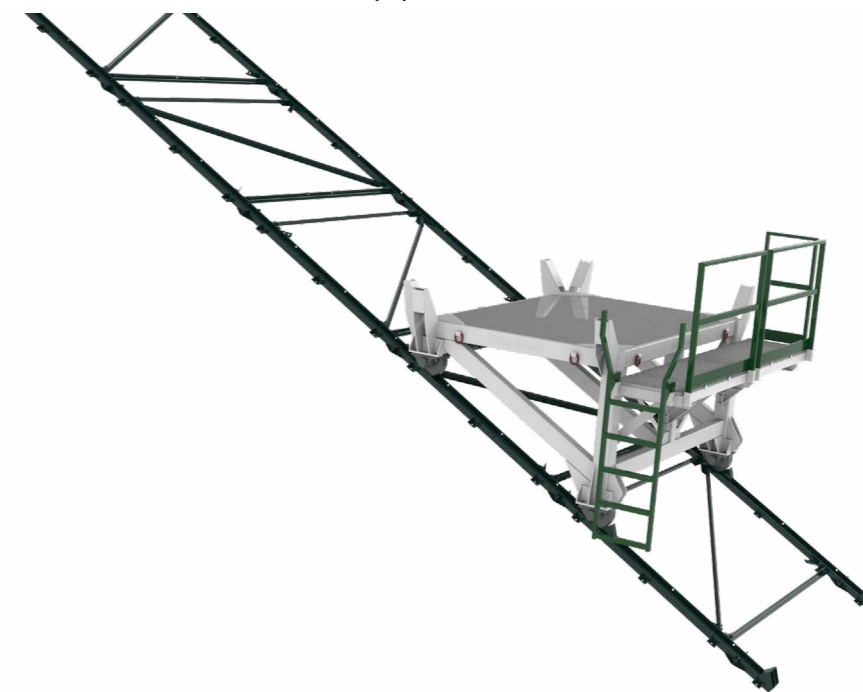




TUNNEL CART FOR INCLINED TRANSPORT

This handling platform was used to excavate the escalator tunnel, primarily for hauling out the excavated material.

Its 10-ton load capacity was well-suited for this demanding task. The equipment was fitted with a winch.

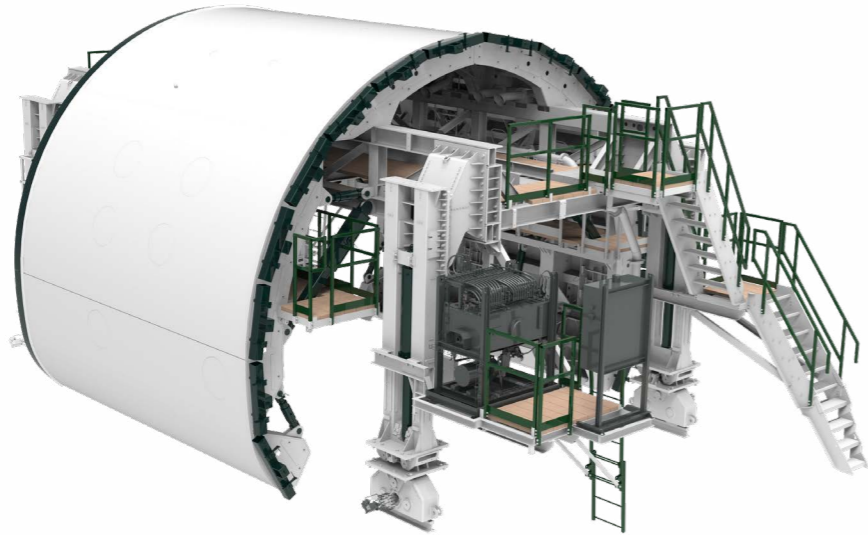


Designed for	access tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	2024
Appr. weight	10 tonnes

TUNNEL FORMWORK CARRIAGE

Formwork equipment capable of casting 6-meter or 4-meter sections was designed for the Metro D in Prag access tunnel.

The equipment was constructed using a modular design, allowing for the casting of shorter sections simply by removing a single segment without the need for further disassembly.



Designed for	access tunnel
Place of deployment	Prague - Metro - Line D, Czech Republic
Date of deployment on site	2/ 2026 - present
Appr. weight	56 tonnes
Length	6 m

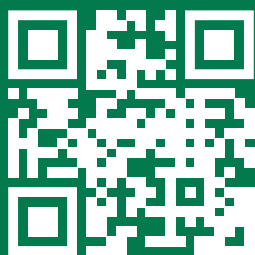




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