



Press Release

# HERRENKNECHT

## Herrenknecht high-tech in XXL format crosses under the Panama Canal

February 12, 2026

Panama City, Panama / Schwanau, Germany

**Since September 2024, a giant Herrenknecht tunnel boring machine (TBM) has been excavating a metro tunnel under the Panama Canal. On February 2, 2026, the construction consortium HPH reached an important milestone with the giant TBM – diameter 13.5 meters – after passing under the Panama Canal: the breakthrough to the future Balboa metro station. From here, the last 1.5 kilometers remain to be completed before final breakthrough. The tunnel builders are breaking new ground with the drive under the Panama Canal and are therefore relying on high-tech “Made in Schwanau.”**

\_\_\_\_\_ On the occasion of the successful breakthrough on February 2, 2026, Panama's President José Raúl Mulino praised the outstanding performance of the tunnel construction team: “I congratulate all of you who made this challenging expedition under the canal possible.” The approximately 4.5-kilometer tunnel is the key structure of the new Metro Line 3, which will connect the western suburbs and downtown Panama City. Until now, 150,000 people commute across a bridge to and from work every morning and evening. The 25-kilometer journey currently takes up to several hours in constant traffic jams. César Pinzón, Director of Metro Panama, referred to this during the ceremony at Balboa station: “For thousands of residents, this first section is a concrete sign that the promised future is approaching, with fast and safe mobility.”

### First time under the Panama Canal

The construction of Metro Line 3 is a premiere: for the first time, a tunnel boring machine is crossing under the Panama Canal, one of the world's most heavily used and therefore most important waterways. The specifications are correspondingly strict, stipulating that the tunnel construction must not compromise the operational safety of the Panama Canal at any time. In view of the complex geology with high groundwater pressure over 60 meters below sea level, the contracted Consortium HPH with the

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companies Hyundai Engineering & Construction, Posco Engineering & Construction and Hyundai Engineering opted for a Herrenknecht machine of the Mixshield type. In order to be able to run the metro through the tunnel on two tracks, a correspondingly large tunnel diameter was planned – with a TBM diameter of 13.5 meters. This makes it the largest machine of its kind in Latin America.

The Mixshield machine type developed by Herrenknecht is designed to safely and efficiently handle complex ground conditions and high groundwater pressure. In close cooperation with the customer's specialists, Herrenknecht engineers equipped the machine with an accessible cutting wheel for the underpass of the Panama Canal: the cutting tools at the front of the cutting wheel can be changed from the rear under atmospheric pressure.

### **Impressive equipment and service package**

Francisco Avila is the CEO of the Herrenknecht national company in Panama. He is impressed by how the diverse equipment and services from the Herrenknecht Group interlock and optimize the entire tunnel construction process: "In the end, it was a large package that we offered and put together specifically to meet the customer's requirements. For example: formwork for the segments to line the bored tunnel, a separation plant for processing the excavated soil, three multi-service vehicles for tunnel and construction site logistics, and systems for precise navigation of the huge machine."

The customer also uses the Herrenknecht.Connected digital platform. Jürgen Hoss, Head of Project Management at Herrenknecht, is convinced: "The TBM alone is equipped with over 4,500 sensors. Keeping track of their data and using them to control processes is a challenge. The tools and dashboards from Herrenknecht.Connected are the solution. This gives everyone involved in the project access to real-time data from the ongoing tunnelling – from the client and partners in the international joint venture to our team in Germany."

### **Great achievements from a great machine**

Since tunnelling began in September 2024 on the western shore of the Panama Canal, the teams have been steering the large machine safely and with ever-increasing performance toward its destination. They mastered the critical crossing under the Panama Canal without any problematic incidents. In October 2025, they achieved their peak performance to date of 150 segment rings or 300 meters per month. After breaking through to the future Balboa station east of the Panama Canal on February 2, 2026, Herrenknecht specialists are now helping the Consortium HPH team get the XXL TBM ready for the last stage of about 1.5 kilometers to the final breakthrough.

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### PROJECT DATA PANAMA METRO LINE 3

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- › Client: Panama Metro
  - › Contractors: Consorcio HPH Joint Venture (Hyundai Engineering & Construction Co., Ltd., Posco Engineering & Construction Co., Hyundai Engineering Co. Ltd.)
  - › Application: Metro
  - › Drive length: 4.5km
  - › Geology: Sandstone, siltstone, tuff, clay and sand, breccias, mudstone, pyroclastic rocks, basalt and andesite
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### MACHINE DATA

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- › Machine type: Mixshield
  - › Diameter: 13,460mm
  - › Cutterhead drive power: 5,600kW
  - › Torque: 26,616kNm
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## Photos



Photo 1

The President of Panama, José Raúl Mulino (front row, middle), witnessed the breakthrough of the XXL Herrenknecht TBM on February 2, 2026.



Photo 2

Members of the Herrenknecht team proudly fly the company's flag after a successful intermediate breakthrough to the future Balboa metro station.

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## For further information: Please contact us.

### **Herrenknecht AG**

Herrenknecht AG is the only company worldwide to deliver tunnel boring machines for all geologies and in all diameters – ranging from 0.10 to 19 meters. The product range comprises tailor-made machines for traffic, supply and disposal tunnels, technologies for pipeline installation as well as additional equipment and service packages. Herrenknecht also manufactures drilling equipment for vertical and inclined shafts as well as deep drilling rigs.

In 2024 the Herrenknecht Group achieved total output of 1,394 million euros. The independent family business employs about 5,000 people worldwide, including approximately 200 apprentices and trainees. With more than 60 domestic and overseas subsidiaries and associated companies working in related fields, Herrenknecht provides comprehensive, fast and targeted services close to each project and contractor.

› <https://www.herrenknecht.com/en/references/>

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