HERRENKNECHT PERIPHERY

WATER COOLING PLANTS

Advantages of Herrenknecht Cooling Plants

HERRENKNECHT CONNECTED

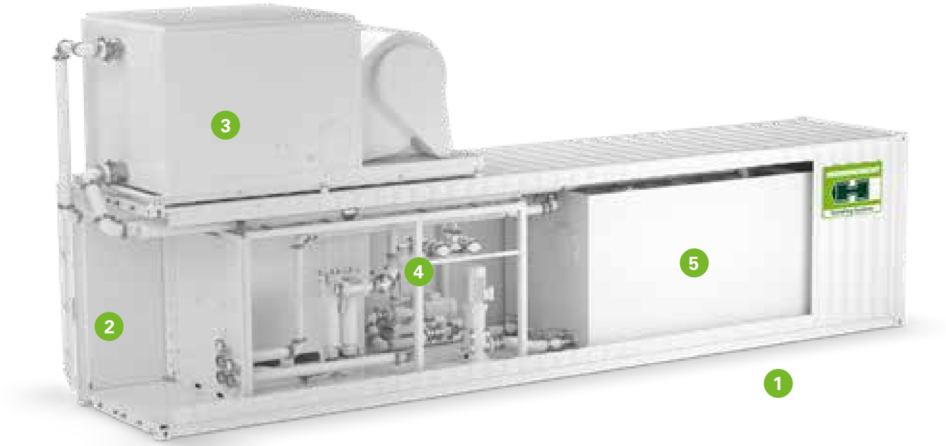
- Supports a longer operation time of the TBM
- Compact containerized design minimizes space requirements
- Interface with Herrenknecht.Connected digital portal
- Easy parameter adjustment via touch panel
- Fully automatic control and efficient cooling for reduced energy costs
- Suitable for every climate worldwide
- Optional UV light anti-legionella system
- Optional desalting unit installation
- Additional options, such as inner-city noise protection

PIONEERING
UNDERGROUND
TOGETHER

HERRENKNECHT
Tunnelling Systems

Herrenknecht Cooling Plants
Technical specifications

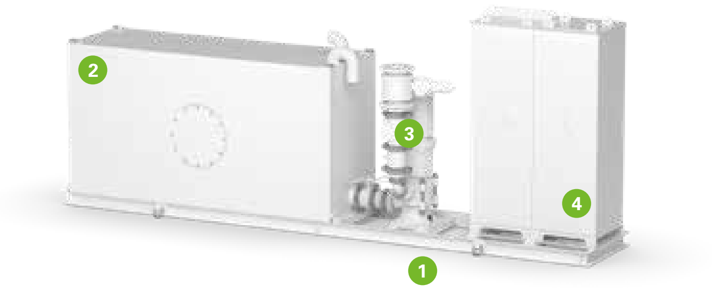
The main task of our cooling system is to supply water at a constant temperature, mostly in closed water circuits. During tunneling, the components on the tunnel boring machine heat up. To bring the relevant components temperature down again, they are cooled with cold water via a heat exchanger. The heated water is then fed back to the cooling system. The hot water flows through a vaporizing cooler (3). This ensures that the TBM system is operated within its perfect temperature range. Our containers are always equipped with thermal insulation, which reduces temperature variations inside (2). In addition, there is a splitable 24m³ water tank inside, which is perfectly designed for tunneling applications. The amount of water stored acts as a buffer tank (5) when the pipes are extended.



1 **Water Cooling Plant**
2 **Thermal insulation**
3 **Cooling tower**
4 **Water supply**
5 **Tank**

Example: Overview of cooling tower system

Booster Stations are used to compensate any pressure losses that may occur. They are positioned at predetermined points and thus enable a constant supply of cooling water. Via the link to Herrenknecht Connected, the Booster Stations can be operated either manually, directly by the TBM or fully automatically together with the cooling system. The link also enables full data recording when combining Herrenknecht equipment.



1 **Booster Station**
2 **Tank**
3 **Booster Pump**
4 **Power supply**

COOLING TOWER

- Cooling power: up to 3,200 kW
- Warm water temperature: up to 50 C°
- Cold water temperature: adapted to the TBM

COOLING CONTAINER

- Volume of tank TBM side: 12 m³ or 18 m³
- Volume of tank cooling tower: 6 m³ or 12 m³
- Output cooling water supply pump: up to 110 kW
- Output cooling tower pump: up to 22 kW

BOOSTER STATION

- Variable tank volume
- Installation angle: up to 20°
- Discharge pressure: up to 18 bar
- Output Booster Pump: up to 90 kW

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