Snowy 2.0

TBM Kirsten

Engineering
Fact sheet 5

TBM KIRSTEN
FAST FACTS

LENGTH
211 metres

WEIGHT
3,350 tonnes

Motors to turn the cutterhead when excavating
14 x 350 kilowatts

TORQUE
23.828 kilonewton-metres

6.75km Total distance to be excavated by this TBM

CUTTERHEAD DIAMETER
11 METRES
(the height of a three-storey building)

63 Cutter discs

11 Gantries

15-20 people needed to operate TBM

Operating gradient
-9% to +47%

4.66
Cutterhead revolutions per minute

WHAT IT WILL EXCAVATE

Emergency, cable and ventilation tunnel, inclined pressure shaft, 2.4km of the headrace tunnel

Manufacturer: Herrenknecht

TBM KIRSTEN HAS BEEN NAMED AFTER NSW ASTROPHYSICIST AND SCIENCE COMMUNICATOR KIRSTEN BANKS.

Kirsten Banks

Kirsten Banks is an astrophysicist, avid science communicator and proud Wiradjuri woman. She has always had a passion for science and a love for the sky, dreaming of becoming a meteorologist in Primary School and then an astrophysicist in High School. Kirsten loves to share her passion for the stars and is most well known for her short and entertaining TikTok videos about space and astronomy. Currently she is doing a PhD in the field of galactic archaeology, studying the stars of the Milky Way to uncover secrets of its formation and evolution.

Did you know?

Snowy 2.0 is showcasing Australian ingenuity to an international audience, with TBM Kirsten excavating one of the most innovative and technologically-advanced tunnels in the world. Just as the original Snowy Scheme gave us rock bolting techniques that are still used today, Snowy 2.0 now has a TBM that is setting a global standard. It has been designed to excavate on a very steep gradient (to +47% or a 25-degree angle) so all equipment within the TBM can switch to work on the incline, and the stairways and walkways will pivot to remain horizontal.