



## Product

## Application

## Highlights

- Hydraulically-applied, spring-released holding and parking brake
- Non-asbestos friction material
- 531 kN braking force
- Compact size
- Easy to mount
- Shot peened, stainless steel discs



## VMH/2 Caliper Brakes

## Wyangala Dam Spillway Gates

The Wyangala Dam, located on the Lachlan River near Cowra, Australia, recently underwent a major upgrade. A significant portion of the project included improvements to the dam's spillway gate braking system. The new system enables the eight massive spillway gates to be raised into a new, higher position and locked in place during an extreme flood event and then returned to their normal operating position when the flood conditions pass. It was determined that gate #8 was the most critical, due to excessive pressures, requiring 490 kN braking force per brake.

Twiflex VMH/2 brakes were selected for this project based on their previously successful implementation on the radial gates of a similar dam in the district. These are designed for a maximum braking force of 433 kN at 110 bar so the challenge was to produce the extra 57 kN without over-stressing the brake at the higher operating pressure required.

Twiflex engineers worked closely with the project contractor and end user to review and agree to the braking specifications along with a test program which had to be witnessed and signed off by a third party inspector before equipment was shipped. The requirement was to demonstrate the higher braking force met the design stresses to the satisfaction of the inspector and prove the braking performance could be achieved on a shot peened stainless steel disc to represent the radial gate rail on which the brakes would be installed. Results as witnessed by the inspector showed the VMH/2 could produce up to 531 kN braking force at 115 bar which exceeded the customer specification for gate #8 while fully meeting the design criteria.

Multiple VMH/2 hydraulically-applied, spring-released caliper brakes were installed on either side of each radial gate. Tie bolt fixing kits and brake monitoring sensors were also supplied.

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