

# Application Profile





## **VCSD-VR Brakes**

### **Gold Mine Hoist**

#### Highlights

- Spring-applied, hydraulically-released stopping and parking brake
- VR models feature large pads (28,990 mm<sup>2</sup> each pad) for higher rubbing speeds and greater thermal capacity
- 11 to 60 kN braking force range
- Unique 'parked-off' feature

Twiflex Ltd. recently provided a new brake solution for use on a mine hoist at the Elko Gold Mine in Nevada. Twiflex supplied two VCSD-VR brakes on each motor pinion operating on a 1.168 m diameter disc to produce a total torque of 128 kNm.

While the braking speed was low at 500 rpm, the stopping time required was between three and five seconds so the peak disc temperature and power dissipation during the stop was high. As a result, a large pad version of the popular Twiflex VCSD designated the 'VR' was selected to provide an increased braking path for higher rubbing speeds and greater thermal capacity.

The Twiflex VCSD is a spring-applied, hydraulically-released disc brake which has been designed for use in harsh environments while providing superior performance in heavy duty dynamic and emergency stopping. Both standard pad (15,700 mm² each pad) and large pad VR (28,990 mm² each pad) versions are available with a braking force range of 11 to 60 kN.

Similar to other Twiflex modular brakes the VCSD design incorporates a unique 'parked-off' feature which allows the brake to be adjusted under hydraulic pressure so that when it is removed there is no stored energy making it completely safe to work on.

Europe +44 (0) 20 8894 1161 twiflex.com US **1-844-723-3483**  Asia Pacific
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altramotion.com/contactus