



Product

VKSD Braking System with SOBO® iQ

Application

Mine Emergency Escape Vent Hoist

Highlights

**Twiflex
VKSD Brakes**

Spring-applied, hydraulically released caliper disc brakes

**Svendborg Brakes
SOBO iQ Control and HPU**

- Unique soft braking control
- Hydraulic power units manufactured in-house

A leading mine hoist and elevator manufacturer located in the Eastern U.S. required a custom braking solution for a new combination emergency escape hoist and ventilation package. The escape hoist, positioned above the mine's ventilation shaft, is driven by a 200 HP motor, reaches a depth of 1874 ft. (571 m), has a max payload capacity of 1500 lb. (680 kg) and travels at a speed of 475 ft./min. (2.413 m/s). In an emergency, when the mine's large primary hoist is not accessible, the escape hoist can bring personnel to the surface quickly utilizing the mine's ventilation shaft.

To meet the hoist's 1.5 sec. emergency stopping and parking application requirements, Twiflex supplied a pair of Model VKSD spring-applied, hydraulically released, dual-spring caliper brakes acting on a pair of discs shaft-mounted to either side of the hoist's cable reel. The braking system included a pair of SOBO iQ hydraulic power units and a SOBO iQ control provided by Svendborg Brakes.

The Twiflex VKSD disc brake caliper range is available in a standard configuration comprising dual-spring modules acting on each side of the disc or as a mono-spring (floating) brake. The minimum disc thickness is 20 mm (.78 in.) and the minimum disc diameter is 1000 mm (39.3 in.). Rated braking force extends from 28 kN to 119 kN (20.6 lb.ft. to 87.7 lb.ft.).

Svendborg Brakes' industry-leading SOBO iQ braking controller combines cutting-edge technologies to provide significant flexibility, safety and durability on mine hoists and conveyors. The controller features three-state digital modulation and a revolutionary dual-loop PI control (pressure/speed). The pressure control is based not only on speed but also on deceleration. Advanced functions such as independent overspeed monitoring, rollback, gearbox and out-of-band monitoring are included. Manufactured in-house, Svendborg Brakes' specialized hydraulic power units are engineered to perform in tough mining applications.

**Contact
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