

Application Profile





Twiflex VMS/2 Disc Brake Calipers

Flight Deck Lifts on Aircraft Carriers

Highlights

- Four VMS/2 Spring Applied, Hydraulically Released brakes
- Total braking force from calipers greater than the thrust of three 747 jets
- Motor output of 250kW supporting a static load of up to 27.5 tonnes

Twiflex disc brakes play a vital role in the handling of expensive military equipment, ranging from medical needles to combat helicopters.

A total of four Twiflex VMS/2 spring applied - hydraulically released calipers are installed on a military lift designed to rise 8.4 metres in 50 seconds. The lift transports helicopters from the ship's hanger to its flight deck and supports a platform area of 16.75 metres by 9.75 metres. It is powered by two hydraulic motors developing an output to 250kW and can support a static load of 27.5 tonnes.

The calipers developing a braking force of 1800kN act on two guide rails and can, at any speed, safely arrest and lock the load into position.

An appreciation of these braking forces can be gained from the fact that a 747 jet engine develops a thrust force equal to 284kN. Accordingly, the thrust needed to fly three of these jets would not equal the forces employed by the lift guaranteeing the safe handling of these combat helicopters.

Safe control is of prime importance when handling military hardware valued in millions of dollars. Consequently, Twiflex high powered fail safe disc brakes are employed to guarantee absolute safety.

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