



Product

VKSD Disc Brakes

Application

Wind Turbines

Highlights

- VKSD disc brake installed for emergency and holding control
- Ensures accurate nacelle positioning and optimum operating efficiency
- Eliminates potential damage from erratic movement with the gear backlash

Braking for wind turbines is demanding, and Twiflex has helped meet those demands by installing VKSD disc brakes on turbine rotor shafts. These brakes are not only used for emergency and holding control but are also recognized as an effective means of smoothly controlling a wind turbine nacelle as it rotates “up wind.”

The anemometer signals a change in wind direction which energized the motor driving the gear ring on the yawing system. The motor is de-energized by a further signal when the yaw mechanism reaches the optimum “up wind” position and the nacelle stops.

Varying wind strengths will cause varying motor loading and therefore determine the accuracy of the nacelle stop relative to the change in wind direction. Motor load can be effectively controlled regardless of wind strength by installing a permanently applied brake on the gear ring face and varying its drag from the signal actuated by the rise or fall in motor current.

Accurate nacelle positioning and optimum operating efficiency is therefore ensured. Potential damage from erratic movement with the gear backlash is eliminated and the brake is an effective clamp to lock the mechanism in position.