

# Wind Turbines Engineered for Antarctica's Extreme Cold

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The wind turbines at Princess Elisabeth Station are specifically designed to function in extremely cold weather. Unlike typical wind turbines that are mounted on large concrete bases, these turbines are drilled directly into the granite ridge beneath the snow and ice. This unique installation method eliminates the need for extensive concrete foundations, which are challenging to construct in such a remote and harsh environment.

Additionally, the turbines are equipped with special polar lubricants that enable them to withstand the freezing temperatures and operate smoothly. This innovative approach ensures a reliable and sustainable energy source for the station, supporting its status as the first zero-emission polar research facility.

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