



SELF-PRESERVING INDUSTRIAL DESIGN

Q3 Power systems are designed with proactive survivability. While standard photovoltaic (PV) panels remain stationary and vulnerable to environmental trauma, Q3 mirrors are equipped with **active robotics** that automatically tilt and fold into protective configurations during high-threat weather scenarios.

SUB-ZERO & HEAVY SNOW RESPONSE

TESTED TO -40°F

THE "SNOW FOLD" MECHANISM

Q3 troughs utilize an automated sensor suite to detect accumulation. Mirrors **automatically tilt and fold** to a 90° vertical "Stow" position. This allows snow to slide off instantly, preventing mirror surfaces from bearing excessive weight or becoming buried.

THERMAL PIPE SECURITY

The insulated PCM storage tank acts as a furnace for the entire field. The system keeps internal loops above freezing even in Arctic conditions, ensuring mirrors can move and the turbine can spin at all times.

HURRICANE & HIGH-WIND DEFENSE

CAT 5 STORM RATED

AERODYNAMIC PROTECTIVE TILT

During hurricane-force wind events, mirrors automatically **tilt** to a neutral aerodynamic angle (parallel to the wind) or fold into a face-down position. This minimizes exposed surface area and protects precision optics from debris and hail.

INDUSTRIAL STEEL HARDENING

Unlike PV frames that can be stripped away by high-velocity shear, Q3's heavy-duty steel trusses are anchored to withstand Category 5 storms, providing the highest level of physical asset protection.

HIGH ALTITUDE & EXTREME HEAT

PEAK YIELD PERFORMANCE

THIN AIR EFFICIENCY

In cold, high-altitude regions (e.g., Colorado), the air is thinner and clearer. This allows mirrors to reflect a purer beam of energy, often resulting in higher thermal yields than in sea-level deserts.

ZERO VOLTAGE DROP

Photovoltaic (PV) panels lose efficiency as they heat up. Q3 mirrors thrive on high temperatures; the hotter the internal fluid becomes, the more energy the system stores for later use.



THE "THERMOS" LOGIC

Chemical batteries are like cell phones: they drain rapidly in the cold. Q3's storage is like a **giant, vacuum-sealed thermos**. We store the sun's heat in a heavily insulated medium impervious to outside weather. Whether it is a freezing -40°F morning or a humid 100°F afternoon, the energy remains trapped and ready for dispatch.

