

VANTIS SHADE SYSTEMS

Smart Film Controller Sizing Guide

This document outlines Vantis Shade Systems' recommended controller sizing standards for PDLC smart film installations. These guidelines are designed to ensure long-term performance, system stability, and reduced warranty risk.

Safe Sizing Rule (Vantis Standard)

Controllers should be loaded to no more than 75–80% of their rated square footage capacity. Avoid sizing to manufacturer maximums. If a system approaches 85–90% of rated capacity, move up to the next controller size.

Recommended Controller Sizing

H15: up to 16 sq ft
H30: up to 34 sq ft
H50: up to 50 sq ft
H100: up to 100 sq ft

For systems exceeding 100 sq ft, divide into multiple zones.

Why This Matters

Proper controller sizing prevents voltage instability, overheating, and inconsistent switching performance. Operating at or near maximum capacity can lead to long-term degradation, flickering, or uneven activation across panels.

Common Causes of Failure

- Overloaded power controllers
- Poor wiring connections
- Voltage drop across long runs
- Improper transformer selection
- Inconsistent busbar application

Best Practices

- Do not size to maximum capacity
- Group similar panels within the same zone
- Keep wiring runs as short and clean as possible
- Use only approved power supplies
- When in doubt, increase controller size

This standard is intended to protect system performance, reduce warranty exposure, and maintain consistent results across all Vantis Smart Film installations.