

SPECIFICATIONS

PART 2—PRODUCTS

(For Part 1 and Part 3, see General Specifications.)

2.01 Manufacturer

- A. Shall furnish all electrical control components, shades, and accessories for complete installation and single source responsibility.

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2.02 Product

A. Skystar Skylight Shades

The Castec Skystar is a motorized skylight shade with an opposed spring tension system. The fabric is unrolled from an aluminum tube inserted with a restricted spring that sits inside an aluminum housing. The extruded hem bar is driven across the length of the opening by a motor. The guide wires attached to the hem bar and the motor are all hidden within an aluminum fascia system designed to cover all the working mechanisms.

2.03 Materials

- A. **Shade Fabric:** Shall be selected from a large choice of vinyl-coated fiberglass and vinyl-coated polyester yarns woven into various configurations and colors. Shading fabrics shall be either .020" diameter 1000-denier polyester core PVC jacketed yarn or .016" diameter 500-denier PVC-coated fiberglass yarn. Woven yarn will be interlocking and heat treated so that all materials are securely bonded. The woven fabrics are made by coating a high strength polyester or fiberglass yarn with a proprietary vinyl compound that employs performance additives. This vinyl compound is specially formulated to resist fading, fire, mildew, soiling, and bacteria.

- 1. **Vinyl-Coated Polyester Fabrics** are available in the weaves listed below.

- a. **Sheerweave 4000, OF 5%**
- b. **Sheerweave 4100, OF 10%**
- c. **Sheerweave 4400, OF 3%**
- d. **Sheerweave 4800, OF 1%**

All vinyl-coated polyester fabrics are available in various colors, and in widths up to 98".

- 2. **Vinyl-Coated Fiberglass Fabrics** are available in the weaves listed below.

- a. **Sheerweave 2000, OF 5%**
- b. **Sheerweave 2100, OF 10%**
- c. **Sheerweave 2390, OF 5%**
- d. **Sheerweave 2360, OF 10%**
- e. **Sheerweave 1000, OF 25%**
- f. **M-Screen, OF 3% and 5%**
- g. **E-Screen 4100, OF 5%**
- h. **E-Screen 4110, OF 10%**
- i. **T-Screen 5103, OF 3%**
- j. **T-Screen 5100, OF 5%**
- k. **T-Screen 5110, OF 10%**
- l. **Verso Veil, OF 1%**
- m. **Basketweave 100, OF 13%**
- n. **Hexcel XL2 Satin Weave, OF 3%, 5%, and 10%**
- o. **Hexcel XL-Screen, OF 5%.**

All vinyl-coated fiberglass fabrics are available in various colors. Maximum widths range from 72" to 98".

- 3. **Combination Fabric: Sheerweave 3000, OF 14%** Made of vinyl-coated fiberglass in the warp for dimensional stability and vinyl jacketed polyester in the fill for shading characteristics and color variety. It has a vertical ribbed pattern, and is available in numerous colors and designs. Maximum width 96".

- 4. **Blackout/Darkroom Fabric:** Shall be totally opaque, Fabric must be made of first quality materials with no pin holes, breaks, or cracks. Must be washable and colorfast. The following Blackout/Darkroom fabrics are available:

- a. **Flocké, OF 0%:** 48% fiberglass with 52% acrylic flocked backing. Available in widths up to 78".
- b. **Hexcel 1260, OF 0%:** Made from fiberglass coated with acrylic. Available in widths up to 71".
- c. **Butler Darkroom 100, OF 0%:** In 12 or 14 oz. 1 ply fiberglass, 3 plies plasticized PVC. Available in widths up to 72".

2.04 Components

A. Motorized Operation

- 1. **Motors:** Shall be asynchronous capacitors start and run, single phase type, operating on 120V-60HZ. They shall have planetary type gears, solenoid-activated disc brakes, and built-in limit switch units. Each motor shall be thermally protected, tubular in shape, and totally

enclosed within the roller tube. Motors shall be UL-recognized and CSA-certified for safe operation. Most motors operate at either 38 RPM or 64 RPM.

- 2. Motor Drive Tube:** Shall be 2"-2¾" diameter, .063" 6063-T5 alloy extruded aluminum with take-up reels mounted on each side to control the position of the lead tapes and fabric panel.
- 3. Motorized Idler End Cap:** Shall consist of an injection molded polymer plug with a steel shaft that will allow easy but positive locking of roller tube into idler end bracket.

B. Spring Loaded Fabric Roller Assembly:

- 1. Spring Operator:** Shall be a torsional roller spring with a plastic, injection-molded tube fitting, compatible with the 1¾" roller tube. Shade position is controlled by the position of the lead tapes and drive tube.
- 2. Spring Roller Tube:** Shall be 1¾" to 2¾" diameter, .03" enameled, roll-formed steel with double-sided adhesive strip applied for exact and firm mounting of the shade fabric. A minimum of one turn of fabric will be placed on the roller before the working section of fabric starts.
- 3. Spring Roller Idler End Cap:** Shall be a polymer molded insert with a protruding steel roller pin that engages the bracket.

2.05 Standard Skystar Accessories

Standard Skystar Accessories are partially assembled at the factory. Fascia brackets, fascia panels, top/back covers, and roller tubes are pre-assembled to aid in installation. The drive tube and the spring-loaded fabric tube are each housed in their own fascia-top/back cover assembly.

- A. Fascia Mounting Brackets:** Shall support the drive tube and the spring-loaded fabric roller tube (with fascia panels and top/back covers) at opposite ends of the skylight opening. They are suitable for inside or outside mount with the drive mechanism on either the right or left hand side of the drive tube. All fascia brackets shall be made of .060" steel and shall be painted with a high quality finish to match the fascia panel.
- B. Fascia Panel:** Shall be installed to completely enclose the roller tube and mounting hardware, providing a clean, finished look. Fascia shall hook onto the top of the bracket and snap in place, remaining firmly attached. Fascia panels shall be 4" high made of .075" extruded aluminum and shall be painted with a high quality baked enamel finish.
- C. Top/Back Cover:** Shall be 4" high .085" extruded aluminum with baked enamel finish and shall fit over fascia brackets and completely cover the top and back of shade mechanism.

- D. Side Closure Channels:** Shall be one piece 2½" deep by 1" wide, .062 extruded aluminum with "T" slots to receive wool pile light seal on both leading edges. Side channels smoothly guide the draw bar and fabric across the skylight opening.
- E. Draw Bar:** Shall be 7/16" x 1" tubular .050" extruded aluminum enclosed in a welded pocket at the leading edge of the fabric.
- F. Take up Cord:** Shall be airline cable strength rated for 150 pounds. Shall have injection polymer construction and be attached to each end of the drive tube.

2.06 Colors and Finishes

Aluminum extrusions are of 6063-T5 alloy available in dark bronze, clear anodized, or white enameled Polycron III or equivalent Duracron finish. Custom colors are available.

2.07 Motorized Controls Options

- A. Individual or Group switching:** Multiple and remote switching available.
- B. Group Control Systems:** For operating any number of motors from one or more switches or remote control. Can be configured to control entire elevations.
- C. Available Switches:** Rocker, toggle, key, or decorator.
- D. Other Accessories:** Infrared and radio remote controllers, 7-day timers, and sun sensors.
- E. Integrated System Operator:** Capable of integrating with complete building automation systems.