

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.

Castec, Inc.
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2.02 Product

- A. **Skystar 701C Skylight Shades:**

The Castec Skystar 701C is a motorized folding skylight shade operated with a Castec Helireel™ operating system. It is constructed with battens sewn into pockets across the shade width. Carriers attached to the battens guide the fabric along tracks on either side of the shade. When the shade is opened, the fabric forms folds or pleats like a Roman shade. The return cords are not visible when the shade is open, except on shades wide enough to require intermediate return cords (72" or wider).

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%, or 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 shall be made of first quality materials with no pin holes, breaks, or cracks and shall be washable and colorfast. The following Blackout/Darkroom fabrics are available:

- a. **Flocke, 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. **Darkroom 100, OF 0%:** in 12 or 14 oz. 1 ply fiberglass, 3 plies plasticized PVC. Available in widths up to 72".

- B. **Helireel Operating System Components:** The Helireel operating system consists of a Somfy LS40 or LT50 motor encased in two tubes, one tube inside the other. The outside tube moves laterally, ensuring that the cords wrap evenly.

- 1. **Motors:** Shall be asynchronous capacitors, single phase type, operating on AC 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. R2 series, 80-RPM motors can be specified for larger shades.

2. **Motor Roller Tube:** Shall be a dual tube of .063" extruded aluminum.
3. **Motor Idler End Cap:** Shall consist of an injection molded polymer plug with a steel shaft.
4. **Motor Mounting Brackets:** For both motor end and idler end shall be galvanized steel.
5. **Motor headrail:** Shall be 4½" x ¾" clear pine covered in shade fabric.
6. **Cords:** Shall be white .02 mm polyester heat-set cord.
 - a. **Lift Cords:** Shall be strung from the bottom rail through rings attached to the shade at each batten, and then through pulleys to the motor tube.
 - b. **Return Cords:** Shall be routed from the motor through pulleys and down the sides above the tracks so as not to be visible when the shade is open. Two return cords are used for shades 72" wide or less. On shades more than 72" wide, one additional return cord is added for every 36". Where additional return cords are needed, the intermediate cords are visible when the shade is open.

C. Hardware Components

1. **Tracks:** Shall be of commercial quality 6063-T1 extruded aluminum not less than .055" wall thickness and shall meet AAMA standards. Tracks shall be 1⅝" wide O.D. x 1¼" high O.D.
2. **Fabric Carriers:** Shall be made of self-lubricating Delrin® and shall be compatible with track. The eye and hook assembly shall be made of .093" Brite basic wire, Brite nickel plated.
3. **Battens:** Shall be of ⅜" diameter anodized aluminum rod and shall be encased in back-facing pockets sewn

horizontally into fabric and spaced approximately 8¾" apart.

4. **Shade Headrail:** Shall be 1½" x ¾" clear pine covered in shade fabric.
5. **Oval Bottom Rail:** Shall be of 6063-T5 extruded aluminum alloy with continuous spline channel at top for fabric attachment.
6. **Oval Bottom Rail End Caps:** Shall be molded polymer and shall match the color of the bottom rail.
7. **Track End Caps:** Shall be steel with clear zinc or black anodized finish and shall attach to the inside of the track end with a flat head screw.
8. **Track Brackets for Inside Mount:** Shall be aluminum, ⅝" wide, and shall match the color of the track.
9. **Guide wires:** Shall be steel cable. Shades less than 72" wide are constructed without guide wires. Shades 72" or wider are constructed with one guide wire per 36" of shade width.
10. **Guide Wire Carriers:** Shall be cast aluminum with aluminum pulleys, and shall be attached to the shade battens with hook assemblies made of Brite basic wire, Brite nickel plated.

2.04 Motor Control 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 from a 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.

2.05 Finishes

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