



SECTION 11132 [11 52 13]

ACUMEN® XL E FRONT PROJECTION SCREENS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Electrically operated, surface mounted, front projection screens.
- B. Front projection screen controls.

1.2 RELATED SECTIONS

- A. Division 5 - Metal Fabrications: Suspension systems for projection screens.
- B. Section 06400 [06 40 00] - Interior Architectural Woodwork: Wood trim for recessed screen installation.
- C. Section 09120 [09 22 26] - Ceiling Suspension System: Supports and trim for suspended ceilings.
- D. Section 09210 [09 26 13] - Gypsum Plaster: Ceiling for recessed screen installation.
- E. Section 09260 [09 21 16] - Gypsum Board Assemblies: Ceiling for recessed screen installation.
- F. Section 09510 [09 51 23] - Acoustical Tile Ceilings: Ceiling for recessed screen installation.
- G. Division 16 [26] for electrical wiring, connections, and installation of remote control switches for electrically operated projection screens.

1.3 REFERENCES

- A. NFPA 70 - National Electrical Code.
- B. NFPA 701-99 - Fire Tests for Flame-Resistant Textiles and Films.
- C. GREENGUARD Environmental Institute Gold.
- D. US Green Building Council.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Wiring diagram for electrically operated units.
- D. Shop Drawings: Shop drawings showing layout and types of projection screens. Show the following:
 - 1. Location of screen centerline.
 - 2. Location of wiring connections.
 - 3. Seams in viewing surfaces.
 - 4. Detailed drawings for concealed mounting.
 - 5. Connections to suspension systems.
 - 6. Anchorage details.
 - 7. Accessories.
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- F. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Single Source Responsibility: Obtain each type of projection screen required from a single manufacturer as a complete unit, including necessary mounting hardware and accessories.
- B. Coordination of Work: Coordinate layout and installation of projection screens with other construction supported by, or penetrating through, ceilings, including light fixtures, HVAC equipment, fire-suppression system, and partitions.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver projection screens until building is enclosed and other construction where screens will be installed is substantially complete.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Protect screens from damage during delivery, handling, storage, and installation.

1.7 COORDINATION

- A. Coordinate work with installation of ceilings, walls, electric service power characteristics, and location.

1.8 WARRANTY

- A. Manufacturer limited warranty: 7 years from date of purchase.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Draper, Inc., which is located at: 411 S. Pearl P. O. Box 425; Spiceland, IN 47385-0425. ASD. Toll Free Tel: 800-238-7999; Tel: 765-987-7999; Fax: 866-637-5611; Web: www.draperinc.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MOTORIZED, SURFACE MOUNTED, FRONT PROJECTION SCREENS

- A. Acumen® XL E: Electric motor operated, wall or ceiling mounted projection screen. Contoured case of 0.156" (3.9624 mm) thick, 9-gauge extruded aluminum. 5-inch (127 mm) diameter metal roller mounted on rubber insulated supports. Removable front fascia conceals viewing surface that retracts completely inside the case. Case dimensions are 9-1/4 inches h x 8-1/8 inches d (235 mm x 206 mm).
 - 1. Motor mounted inside screen roller on rubber isolation insulators. Motor UL certified, rated 110-120V AC, 60 Hz, three wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor shall be left mounted.
 - 2. Quiet Motor mounted inside screen roller on rubber isolation insulators. Motor operates at 44db. UL certified, rated 110-120V AC, 60 Hz, three wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor shall be left mounted.
 - 3. System Options:
 - a. Contoured aluminum case finished in a white color (standard).
 - b. Contoured aluminum case finished in a black color.

Select the mounting bracket required for either ceiling or wall mounting

Wall Mount Brackets (standard): "Floating" steel brackets, finished to match screen case.

 - d. Ceiling Mount Brackets: "Floating" steel brackets, finished to match screen case.
 - 4. Projection Viewing Surface:
 - a. Matt White XT1000E – On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified. 4K ready.
 - b. Contrast Grey XH800E – 0.8 On Axis gain. Smooth grey surface provides excellent resolution and enhances color contrast. 180 degree viewing cone. GREENGUARD Gold certified. 4K ready.
 - 5. Viewing Area H x W.
 - a. Custom Size: _____ H x _____ W.
 - b. 16:10 Format. Black masking borders standard.
 - 1) 165 inch (419 cm) diagonal, 87-1/2 inches x 140 inches (222 cm x 356 cm).
 - 2) 189 inch (480 mm) diagonal, 100 inches x 160 inches (254 cm x 406 cm).
 - 3) 198 inch (503 cm) diagonal, 105 inches x 168 inches (267 cm x 427 cm).
 - 4) 226 inch (574 cm) diagonal, 120 inches x 192 inches (305 cm x 488 cm).
 - 5) 255 inch (648 cm) diagonal, 135 inches x 216 inches (343 cm by 549 cm).

- c. HDTV Format (16:9). Black masking borders standard.
 - 1) 161 inch (409 cm) diagonal, 79 inches x 140 inches (201 cm x 356 cm).
 - 2) 184 inch (468 cm) diagonal, 90 inches x 160 inches (229 cm x 406 cm).
 - 3) 193 inch (490 cm) diagonal, 94-1/2 inches x 168 inches (240 cm x 427 cm).
 - 4) 220 inch (559 cm) diagonal, 108 inches x 192 inches (274 cm x 488 cm).
 - 5) 248 inch (630 cm) diagonal, 121-1/2 inches x 216 inches (309 cm x 549 cm).
- d. 2:39:1 CinemaScope Format
 - 1) 135 inch (343 cm) diagonal, 52 inches x 124-1/4 inches (132 cm x 316 cm).
 - 2) 150 inch (381 cm) diagonal, 58 inches x 138-1/4 inches (147 cm x 351 cm).
 - 3) 169 inch (429 cm) diagonal, 65 inches x 155-1/4 inches (165 cm x 394 cm).
 - 4) 208 inch (528 cm) diagonal, 80 inches x 191-1/4 inches (203 cm x 486 cm).
- e. 1.9:1 2K/4K Full
 - 1) 139 inch (353 cm) diagonal, 65 inches x 123-1/2 inches (165 cm x 314 cm).
 - 2) 161 inch (409 cm) diagonal, 75 inches x 142-1/2 inches (191 cm x 362 cm).
 - 3) 182 inch (462 cm) diagonal, 85 inches x 161-1/2 inches (216 cm x 410 cm).
 - 4) 204 inch (518 cm) diagonal, 95 inches x 180-1/2 inches (241 cm x 459 cm).
- 6. Provide an extra screen drop with an overall screen drop of ____ inches (____ mm) with top border matching the viewing surface.
- 7. Provide an extra screen drop with an overall screen drop of ____ inches (____ mm) with a black masking top border.

2.3 FRONT PROJECTION SCREEN CONTROLS

- A. General: All controls are UL Certified.
 - 1. Built-in low voltage control unit with three button 24V switches and cover plate to stop or reverse screen at any point, built-in RF receiver, built-in Video Interface Control trigger for 3V-28V, RS232, and dry contact relays (standard).
 - 2. Low voltage 24V control unit with hand held RF remote three button control switch to stop or reverse screen at any point, built-in RF receiver, built-in Video Interface Control trigger for 3V-28V, RS232, and dry contact relays. .
 - 3. Low voltage 24V control unit with hand held IR remote three button control switch to stop or reverse screen at any point, built-in RF receiver, built-in Video Interface Control trigger for 3V-28V, RS232, and dry contact relays
 - 4. Single station control rated 115V AC, 60 Hz with 3-position rocker switch with cover plate to stop or reverse screen at any point.
 - 5. Multiple station control rated 115V AC, 60 Hz with 3-position rocker switches with cover plates to stop or reverse screen at any point. Automatic override allows only one signal to reach the motor when operated simultaneously.
 - 6. Key Operated power supply switch to control power to control system.
 - 7. Locking switch cover plate for limited access to three position switch.
 - 8. Key operated 3-position control switch rated 115V AC, 60 Hz to stop or reverse screen at any point.

9. 3-position low voltage control switch with key locking cover plate rated 24V to stop or reverse screen at any point.
10. LVC-IP Bridge. Acts as an IP to Serial Gateway for controlling Draper lifts & screens when used in conjunction with an LVC-IV. Configuration is done using built-in buttons and display.
11. Motor shall be left mounted.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify rough-in openings are properly prepared.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install front projection screens with screen cases in position and relationship to adjoining construction as indicated, securely anchored to supporting substrate, and in manner that produces a smoothly operating screen with plumb and straight vertical edges and plumb and flat viewing surfaces when screen is lowered.
- C. Test electrically operated units to verify that screen, controls, limit switches, closure and other operating components are in optimum functioning condition.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION