



SECTION 11 52 13

ACCESS E FRONT PROJECTION SCREENS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Electrically operated, ceiling recessed, 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 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: 5 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, CEILING RECESSED, FRONT PROJECTION SCREENS

- A. Access E: Electric motor operated, steel case. Ceiling-recessed, 18-gauge steel headbox, 7-3/8 inches high x 8-1/16 inches deep (188 mm high x 205 mm wide) including trim flanges with white paint finish and stamped 13-gauge steel end caps. UL approved "Suitable for use in environmental air space." Bottom closure panel forms slot for passage of viewing surface and can be released to hang down or be removed for access to operating mechanism and viewing surface. Bottom perimeter flange provides support and trim for acoustical ceiling panels and trim for gypsum board ceiling. Access case may be ordered in advance and the screen installed later to eliminate field damage. Housing is symmetrical allowing for left (Standard) and right (optional) hand motor locations and for viewing surface to unroll off front or back of roller. Steel mounting brackets slide in extruded aluminum mounting system along top of case. Brackets supporting roller/fabric assembly slide in tracks inside top of case, allowing viewing surface to be centered in case. Steel leveling brackets are attached to case to prevent deflection. Housing designed with internal junction box and plug-in wiring connections to allow housing to be installed and connected to building power supply separately from motor and viewing surface.
 - 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.
 - 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.
 - 3. Projection Viewing Surface:
 - 4. Motor shall be left mounted (standard).
 - 5. Motor shall be right mounted (optional).
 - 6. 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. Maximum size available is 12 feet by 12 feet (366 cm x 366 cm). 4K ready.
 - c. ClearSound White Weave XT900E - On Axis gain of 0.9. 180 degree viewing cone. Acoustically transparent woven blend of fiberglass and PVC. Acoustical properties are comparable to the highest quality speaker grille cloth. Some control of ambient light is recommended. Flame and mildew resistant. Not recommended for viewing less than 10 feet (305 cm) from screen. 4K ready.

- d. Chroma Key Green - Green flexible PVC surface for video production where you need the background to "disappear." Matte finish. Flame retardant, tear resistant, and wrinkle resistant. Offers excellent uniformity and consistent surface color edge to edge. Works effectively throughout 180-degree viewable range.
7. Viewing Area H x W.
- a. HDTV Format (16:9). Black masking borders standard.
 - 1) 92 inch (2337 mm) diagonal, 45 inches x 80 inches (1143 mm x 2032 mm).
 - 2) 100 inch (2540 mm) diagonal, 49 inches x 87 inches (1245 mm x 2210 mm)
 - 3) 106 inch (2692 mm) diagonal, 52 inches x 92 inches (1321 mm x 2337 mm).
 - 4) 110 inch (2794 mm) diagonal, 54 inches x 96 inches (1372 mm x 2438 mm)
 - 5) 119 inch (3023 mm) diagonal, 58 inches x 104 inches (1473 mm x 2642 mm).
 - 6) 133 inch (3378 mm) diagonal, 65 inches x 116 inches (1651 mm x 2947 mm).
 - 7) 161 inch (4089 mm) diagonal, 79 inches x 140 inches (2007 mm x 3556 mm).
 - 8) 184 inch (4674 mm) diagonal, 90 inches x 160 inches (2286 mm x 4064 mm).
 - 9) 193 inches (490 cm) diagonal, 94-1/2 inches x 168 inches (240 x 427 cm).
 - 10) 220 inches (559 cm) diagonal, 106 inches x 188 inches (269 x 478 cm).
 - b. 16:10 Format. Black masking borders standard.
 - 1) 94 inch (2438 mm) diagonal, 50 inches x 80 inches (1270 mm x 2032 mm).
 - 2) 109 inch (2769 mm) diagonal, 57-1/2 inches x 92 inches (1461 mm x 2337 mm).
 - 3) 113 inch (2870 mm) diagonal, 60 inches x 96 inches (1524 mm x 2438 mm).
 - 4) 123 inch (3124 mm) diagonal, 65 inches x 104 inches (1351mm x 2642 mm).
 - 5) 137 inch (3480) diagonal, 72-1/2 inches x 116 inches (1842 mm by 2946 mm).
 - 6) 165 inch (4191 mm) diagonal, 87-1/2 inches x 140 inches (2223 mm by 3556 mm).
 - 7) 189 inch (4800 mm) diagonal, 100 inches x 160 inches (2540 mm x 4064 mm).
 - 8) 198 inches (503 cm) diagonal, 105 inches x 168 inches (267 x 427 cm).
 - 9) 222 inches (564 cm) diagonal, 117-1/2 inches x 188 inches (298 x 478 cm).
 - c. NTSC Format (4:3). Black masking borders standard.
 - 1) 7 foot (2.13 m) diagonal, 50 inches x 66-1/2 inches (1270 mm x 1689 mm).
 - 2) 100 inch (2540 mm) diagonal, 60 inches x 80 inches (1524 mm x 2032 mm).
 - 3) 10 foot (3.05 m) diagonal, 69 inches x 92 inches (1753 mm x 2337 mm).
 - 4) 11 foot (3.35 m) diagonal, 78 inches x 104 inches (1981 mm x 2642 mm).

- 5) 150 inch (3810 mm) diagonal, 87 inches x 116 inches (2210 mm x 3658 mm).
 - 6) 15 foot (4.57 m) diagonal, 105 inches x 140 inches (2667 mm x 3556 mm).
 - 7) 200 inch (5080 mm) diagonal, 118 inches x 158 inches (2997 mm x 4013 mm).
 - 8) 210 inches (534 cm) diagonal, 126 inches x 168 inches (320 x 427 cm).
 - 9) 220 inches (559 cm) diagonal, 132 inches x 176 inches (335 x 447 cm).
 - 10) 240 inches (610 cm) diagonal, 141 inches x 188 inches (358 x 478 cm).
8. Provide an extra screen drop with an overall screen drop of ___ inches (___ mm) with top border matching the viewing surface.
 9. 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. Single station control rated 115V AC, 60 Hz with 3-position rocker switch with cover plate to stop or reverse screen at any point.
 2. 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.
 3. 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.
 4. 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.
 5. 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.
 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.

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