



SECTION 11 52 13.50

ACUMEN® V TAB-TENSIONED SURFACE-MOUNTED FRONT PROJECTION SCREEN

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 06 40 00 - Architectural Woodwork.
- C. Section 09 22 26 - Suspension Systems.
- D. Section 09 26 13 - Gypsum Veneer Plastering.
- E. Section 09 21 16.23 - Gypsum Board Shaft Wall Assemblies.
- F. Section 09 51 23 - Acoustical Tile Ceilings.
- G. Division 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 01 30 00 - Administrative Requirements.
- 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.
 8. Frame details.
- 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.

1.2 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; Toll Free Tel: 800-238-7999; Tel: 765-987-7999; Fax: 866-637-5611; Email:[request info \(drapercontract@draperinc.com\)](mailto:request info (drapercontract@draperinc.com)); Web:www.draperinc.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60

00 - Product Requirements.

2.2 MOTORIZED, SURFACE MOUNTED, FRONT PROJECTION SCREENS

- A. Acumen® V: Electric motor operated, tab tensioned, wall or ceiling mounted projection screen. Contoured case of 0.156" (3.9624 mm) thick, 9-gauge extruded aluminum. Removable front fascia conceals viewing surface that retracts completely inside the case. Case dimensions are 7-1/8 inches h x 5-7/8 inches d (181 mm x 149 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. Low voltage control built into endcap.
 2. Quiet Motor mounted inside screen roller on rubber isolation insulators. Motor operates at 44db and is 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. Low voltage control built into endcap.
 3. System Options:
 - a. Contoured aluminum case finished in a white color (standard).
 - b. Contoured aluminum case finished in a black color.
 - c. 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. TecVision XH700X Premium Contrast Grey - On Axis gain of 0.7. 180 degree viewing cone. Designed for blending applications on curved or flat screens or Ultra-Short Throw (UST) projection where ambient light is present. Provides very good contrast and color reproduction. Imaging Science Foundation certified and 8K ready. Dark backing.
 - b. TecVision XH1200X Premium Contrast Grey - On Axis gain of 1.2. 100 degree viewing cone. Designed to enhance contrast under controlled light. Provides excellent color reproduction. Imaging Science Foundation certified and 8K ready. Dark backing.
 - c. TecVision XH800X ALR - 0.8 gain. Rejects 57% of off-axis ambient light, supports extremely wide viewing angles. Lens/Throw distance ratio for best brightness uniformity: 0.7:1 or longer. Imaging Science Foundation certified. 8K ready. Dark backing.
 - d. TecVision XH900X ALR - On Axis gain of 0.9. Rejects 60% of off-axis ambient light. 180 degree viewing cone. Provides very good contrast and color reproduction. Imaging Science Foundation certified. 8K ready. Dark backing.
 - e. TecVision MS1000X ALR – Rejects 73% of off-axis ambient light. On Axis gain of 1.0. 70 degree viewing cone. Provides excellent contrast and color reproduction. Performs well in ambient light. Imaging Science Foundation certified. 8K ready. Dark backing.
 - f. TecVision CS1100X ALR - On Axis gain of 1.1. Rejects 82% of off-axis ambient light. 40 degree viewing cone. Provides excellent contrast and color reproduction. Performs well in ambient light. Imaging Science Foundation certified. 8K ready. Dark backing.
 - g. TecVision XT1000X White - On Axis gain of 1.0. 180 degree viewing cone. Imaging Science Foundation certified. 8K ready reference screen surface for blending applications and Ultra-Short Throw (UST) projection. Precise resolution and color accuracy. Dark backing.
 - h. TecVision XT1100X White - On-Axis gain of 1.1. 180 degree viewing cone. Designed for use when the projector brightness and size of screen require a

- minimal increase in gain. Imaging Science Foundation certified and 8K ready.
 - i. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 8K ready. Dark backing.
 - j. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 8K ready. Dark backing.
 - k. Matt White XT1000VB - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Black backing.
 - l. Grey XH600V - On Axis gain of 0.6. Provides excellent contrast and color reproduction. GREENGUARD Gold certified. Available with or without black backing.
 - m. ClearSound NanoPerf XT1000V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent white PVC fabric with microscopic perforations.
 - n. CineFlex CH1200V - On Axis gain of 1.2. 60 degree viewing cone. Neutral grey rear projection diffusing surface. Provides high resolution and excellent contrast, even in lighted rooms. Recommended for use with low to medium output projectors.
 - o. CineFlex White XT700V - On Axis gain of 0.7. 180 degree viewing cone. White rear projection surface works well for edge matching or edge blending applications, and also for short throw rear projection. Reasonable control of ambient light is recommended.
5. Tab-Tensioning System:
- a. Viewing surface with integrated tabs and cable on each side of fabric to provide tension and ensure flat viewing surface. Viewing surface and tabs CNC cut as a single piece. Tabs RF welded to the back of viewing surface to prevent tab separation. Tab adhesives are not acceptable. Viewing surface inserted into aluminum bottom dowel.
6. Viewing Area H x W.
- a. Custom Size: _____ H x _____ W.
 - 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).
 - c. 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).
 - d. 2:39:1 CinemaScope Format
 - 1) 117 inch (2972 mm) diagonal, 45 inches x 107-1/2 inches (1143 mm x 2731 mm).
 - e. 1.9:1 2K/4K Full

- 1) 96 inch (2438 mm) diagonal, 45 inches x 85-1/2 inches (1143 mm x 2172 mm).
 - 2) 118 inch (2998 mm) diagonal, 55 inches x 104-1/2 inches (1397 mm x 2654 mm).
7. Provide an extra screen drop with an overall screen drop of ___ inches (___ mm) with top border matching the viewing surface.
 8. 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