

SECTION 11 52 13.50

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

\*\* NOTE TO SPECIFIER \*\* Draper, Inc.; Wall and ceiling surface mounted front projection screens.
This section is based on the products of 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)](http://admin.arcat.com/users.pl?action=UserEmail&company=Draper,+Inc.&coid=32063&rep=&fax=866-637-5611&message=RE:%20Spec%20Question%20(11132dra):%20%20&mf=)
Web:[www.draperinc.com](http://www.draperinc.com)
[[Click Here](http://www.arcat.com/arcatcos/cos32/arc32063.html)] for additional information.
Draper manufactures the best and most complete line of projection screens in the world. We want to help you incorporate these screens into the most effective presentation systems. Planning a projection system involves several steps: choosing the screen size, viewing surface, screen model and control system if required. For additional information, see Draper Screen Selection/Resource Center at www.draperinc.com.

1. GENERAL
	1. SECTION INCLUDES
		1. Electrically operated, surface mounted, front projection screens.
		2. Front projection screen controls.
	2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Division 5 - Metal Fabrications: Suspension systems for projection screens.
		2. Section 06 40 00 - Architectural Woodwork.
		3. Section 09 22 26 - Suspension Systems.
		4. Section 09 26 13 - Gypsum Veneer Plastering.
		5. Section 09 21 16.23 - Gypsum Board Shaft Wall Assemblies.
		6. Section 09 51 23 - Acoustical Tile Ceilings.
		7. Division 26 for electrical wiring, connections, and installation of remote control switches for electrically operated projection screens.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. NFPA 70 - National Electrical Code.
		2. NFPA 701-99 - Fire Tests for Flame-Resistant Textiles and Films.
		3. GREENGUARD Environmental Institute Gold.
		4. US Green Building Council.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. 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.
		3. Wiring diagram for electrically operated units.

\*\* NOTE TO SPECIFIER \*\* Retain below for front projection screens where shop drawings are needed to understand relationships with adjoining work.

* + 1. Shop Drawings: Shop drawings showing layout and types of projection screens. Show the following:

\*\* NOTE TO SPECIFIER \*\* Edit below to suit screens specified and project conditions.

* + - 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.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
	1. QUALITY ASSURANCE
		1. Single Source Responsibility: Obtain each type of projection screen required from a single manufacturer as a complete unit, including necessary mounting hardware and accessories.
		2. 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.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Do not deliver projection screens until building is enclosed and other construction where screens will be installed is substantially complete.
		2. Store products in manufacturer's unopened packaging until ready for installation.
		3. Protect screens from damage during delivery, handling, storage, and installation.
	3. COORDINATION
		1. Coordinate work with installation of ceilings, walls, electric service power characteristics, and location.
	4. WARRANTY
		1. Manufacturer limited warranty: 7 years from date of purchase.
1. PRODUCTS
	1. MANUFACTURERS
		1. 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)](http://admin.arcat.com/users.pl?action=UserEmail&company=Draper,+Inc.&coid=32063&rep=&fax=866-637-5611&message=RE:%20Spec%20Question%20(11132dra):%20%20&mf=); Web:[www.draperinc.com](http://www.draperinc.com)

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. MOTORIZED, SURFACE MOUNTED, FRONT PROJECTION SCREENS

**\*\* NOTE TO SPECIFIER:\*\* Maximum image width up to 10 feet (305 cm) wide, depending on surface selection.**

* + 1. 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).

\*\* NOTE TO SPECIFIER \*\* Select one of the following motor paragraphs and delete the paragraph not required. Note that there are size limitations with quiet motors. Contact manufacturer for additional information.

* + - 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:

\*\* NOTE TO SPECIFIER \*\* Select the required case finish.

* + - * 1. Contoured aluminum case finished in a white color (standard).
				2. Contoured aluminum case finished in a black color.

\*\* NOTE TO SPECIFIER \*\* Select the mounting bracket required for either ceiling or wall mounting.

* + - * 1. Wall Mount Brackets (standard): “Floating” steel brackets, finished to match screen case.
				2. Ceiling Mount Brackets: “Floating” steel brackets, finished to match screen case.
			1. Projection Viewing Surface:

\*\* NOTE TO SPECIFIER \*\* Select the screen type from the following paragraphs and delete those not required. Note that there are size limitations with some viewing surfaces. Contact manufacturer for additional information.

* + - * 1. TecVision XH700X 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.
				2. TecVision XH1200X 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.
				3. 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.
				4. 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.
				5. 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.
				6. 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.
				7. 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.
				8. 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.
				9. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 8K ready. Dark backing.
				10. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 8K ready. Dark backing.
				11. Matt White XT1000VB - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Black backing.

\*\* NOTE TO SPECIFIER \*\* Grey XH600V maximum size available is 9 feet by 12 feet (274 cm x 366 cm).

* + - * 1. Grey XH600V - On Axis gain of 0.6. Provides excellent contrast and color reproduction. GREENGUARD Gold certified. Available with or without black backing.

\*\* NOTE TO SPECIFIER \*\* ClearSound NanoPerf XT1000V is not recommended for viewing less than 10 feet (305 cm) from screen.

* + - * 1. ClearSound NanoPerf XT1000V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent white PVC fabric with microscopic perforations.
				2. 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.
				3. 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.
			1. Tab-Tensioning System:
				1. 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.

\*\* NOTE TO SPECIFIER \*\* Select the screen format and size required for the project. Delete the paragraphs not required.

* + - 1. Viewing Area H x W.
				1. Custom Size: \_\_\_\_\_\_\_\_ H x \_\_\_\_\_\_\_\_\_\_\_\_ W.
				2. 16:10 Format. Black masking borders standard.

94 inch (2438 mm) diagonal, 50 inches x 80 inches (1270 mm x 2032 mm).

109 inch (2769 mm) diagonal, 57-1/2 inches x 92 inches (1461 mm x 2337 mm).

113 inch (2870 mm) diagonal, 60 inches x 96 inches (1524 mm x 2438 mm).

123 inch (3124 mm) diagonal, 65 inches x 104 inches (1351mm x 2642 mm).

137 inch (3480) diagonal, 72-1/2 inches x 116 inches (1842 mm by 2946 mm).

* + - * 1. HDTV Format (16:9). Black masking borders standard.

92 inch (2337 mm) diagonal, 45 inches x 80 inches (1143 mm x 2032 mm).

100 inch (2540 mm) diagonal, 49 inches x 87 inches (1245 mm x 2210 mm)

106 inch (2692 mm) diagonal, 52 inches x 92 inches (1321 mm x 2337 mm).

110 inch (2794 mm) diagonal, 54 inches x 96 inches (1372 mm x 2438 mm)

119 inch (3023 mm) diagonal, 58 inches x 104 inches (1473 mm x 2642 mm).

133 inch (3378 mm) diagonal, 65 inches x 116 inches (1651 mm x 2947 mm).

* + - * 1. 2:39:1 CinemaScope Format

117 inch (2972 mm) diagonal, 45 inches x 107-1/2 inches (1143 mm x 2731 mm).

* + - * 1. 1.9:1 2K/4K Full

96 inch (2438 mm) diagonal, 45 inches x 85-1/2 inches (1143 mm x 2172 mm).

118 inch (2998 mm) diagonal, 55 inches x 104-1/2 inches (1397 mm x 2654 mm).

\*\* NOTE TO SPECIFIER \*\* If an extra screen drop is required for the project, fill in the drop height and select one of the following paragraphs. Total screen height cannot exceed 18 feet (5.49 m). Extra drop cannot exceed 84 inches (213 cm). Select viewing surface color or black. Black is standard. If not required, delete both paragraphs.

* + - 1. Provide an extra screen drop with an overall screen drop of \_\_\_ inches (\_\_\_ mm) with top border matching the viewing surface.
			2. Provide an extra screen drop with an overall screen drop of \_\_\_ inches (\_\_\_ mm) with a black masking top border.

\*\* NOTE TO SPECIFIER \*\* This screen includes low voltage control unit with three button 24V switch and cover plate as the standard control. If this is the control you wish, keep this paragraph and delete all others. If you wish to select different controls and wall and/or remote-control switches required for project, delete the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* 1. FRONT PROJECTION SCREEN CONTROLS
		1. General: All controls are UL Certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options 4, 5, 7, or 8.

* + - 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).

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options 4, 5, 7, or 8.

* + - 1. 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. .

\*\* NOTE TO SPECIFIER \*\* Not compatible with options 4, 5, 7, or 8.

* + - 1. 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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options 1, 2, 3, 5, 8, or 9.

* + - 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.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options 1, 2, 3, 8, or 9.

* + - 1. 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.

\*\* NOTE TO SPECIFIER \*\* Compatible with all options.

* + - 1. Key Operated power supply switch to control power to control system.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options 1, 2, 3, 8, or 9.

* + - 1. Locking switch cover plate for limited access to three position switch.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options 1, 2, 3, 4, 5, 7, or 9.

* + - 1. Key operated 3-position control switch rated 115V AC, 60 Hz to stop or reverse screen at any point.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options 4 5, 6, 7, or 8.

* + - 1. 3-position low voltage control switch with key locking cover plate rated 24V to stop or reverse screen at any point.

\*\* NOTE TO SPECIFIER \*\* LVC-IV Required. Not compatible with options 4, 5, 7, or 8.

* + - 1. 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.
			2. Motor shall be left mounted.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. Verify rough-in openings are properly prepared.
		3. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
		2. 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.
		3. Test electrically operated units to verify that screen, controls, limit switches, closure and other operating components are in optimum functioning condition.
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION