SECTION 11 52 13.52

CEILING RECESSED FRONT PROJECTION SCREENS

Display hidden notes to specifier. (Don't know how? [Click Here](http://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Draper Inc; Ceiling recessed 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(11133dra):%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](http://www.draperinc.com) .

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Manually operated, ceiling recessed, front projection screens.
		2. Electrically operated, ceiling recessed, front projection screens.
	1. 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 16 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.

\*\* NOTE TO SPECIFIER \*\* Delete below if no electrically operated screens.

* + 1. 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.
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(11133dra):%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. MANUALLY OPERATED, CEILING RECESSED, FRONT PROJECTION SCREENS

\*\* NOTE TO SPECIFIER \*\* Delete from the following paragraphs the models of ceiling recessed, manually operated, front projection screens not used on the project.

* + 1. Access/Series M: Spring roller operated, steel case. Ceiling-recessed, 18-gauge steel housing, 6-1/2 inches (182 mm) deep and 6-13/16 inches (182 mm) wide 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 viewing surface. Bottom perimeter flange provides support and trim for acoustical ceiling panels or gypsum board ceiling. Steel mounting brackets slide in extruded aluminum mounting system along top of case. Brackets supporting roller/fabric assembly slide in tracks inside the top of the case, allowing viewing surface to be centered in case. Steel leveling brackets are attached to case to prevent deflection. Housing designed to be installed separately from roller/viewing surface assembly. Factory or site installed roller: metal tube with heavy-duty spring and mounted on zinc plated brackets with double row radial ball bearings. Viewing surface securely attached to roller at top and at bottom hemmed around steel dowel. Provide with pull cord.
			1. System Options:

\*\* NOTE TO SPECIFIER \*\* Select the following auto return paragraph if required and delete if not required.

* + - * 1. Auto Return spring roller with built-in inertia reduction mechanism to ensure viewing surface retracts slowly, smoothly and quietly into case. Provide intermediate stop positions.
			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. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.
				2. 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.

\*\* 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. NTSC Format (4:3). Black masking borders standard.

15 foot (4.57 m) diagonal, 105 inches x 140 inches (2667 mm x 3556 mm).

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

161 inch (4089 mm) diagonal, 79 inches x 140 inches (2007 mm x 3556 mm).

* + - * 1. 16:10 Format. Black masking borders standard.

165 inch (4191 mm) diagonal, 87-1/2 inches x 140 inches (2223 mm by 3556 mm).

* + - * 1. Custom Size: \_\_\_\_\_\_\_\_ H x \_\_\_\_\_\_\_\_\_\_\_\_ W.

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop is required for the project fill in the drop height and select one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). Select viewing surface color or black. Matching the viewing surface is standard for AV format, black is standard for all other formats. If extra screen drop is 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 top border.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the paragraph not required.

* + - 1. Provide with optional 4 foot (1.22 m) aluminum operating pole.
			2. Provide with optional 6 foot (1.83 m) aluminum operating pole.
		1. Access Fit/Series M: Spring roller operated, steel case. Ceiling-recessed, 18-gauge steel housing, 6-1/2 inches (182 mm) deep and 6-13/16 inches (182 mm) wide 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 viewing surface. Bottom perimeter flange provides support and trim for acoustical ceiling panels or gypsum board ceiling. Steel mounting brackets slide in extruded aluminum mounting system along top of case. Brackets supporting roller/fabric assembly slide in tracks inside the top of the case, allowing viewing surface to be centered in case. Steel leveling brackets are attached to case to prevent deflection. Housing designed to be installed separately from roller/viewing surface assembly. Factory or site installed roller: metal tube with heavy-duty spring and mounted on zinc plated brackets with double row radial ball bearings. Viewing surface securely attached to roller at top and at bottom hemmed around steel dowel. Provide with pull cord.
			1. System Options:

\*\* NOTE TO SPECIFIER \*\* Select the following auto return paragraph if required and delete if not required.

* + - * 1. Auto Return spring roller with built-in inertia reduction mechanism to ensure viewing surface retracts slowly, smoothly and quietly into case. Provide intermediate stop positions.
			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. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.

\*\* NOTE TO SPECIFIER \*\* Argent White XH1500E maximum size available is 8 feet by 10 feet (244 cm x 305 cm).

* + - * 1. Argent White XH1500E - On Axis gain of 1.5. High reflectivity fabric with broad viewing cone. Excellent resolution and color balance. Flame and Mildew resistant.

\*\* NOTE TO SPECIFIER \*\* Pearl White CH1900E maximum size available is 96 inches by 96 inches (244 cm x 244 cm).

* + - * 1. Pearl White CH1900E - On Axis gain of 1.9. Matt white surface with reflective pearlescent coating.
				2. 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.

\*\* NOTE TO SPECIFIER \*\* Contrast White XH1100E maximum size available is 8 feet by 10 feet (244 cm x 305 cm)

* + - * 1. Contrast White XH1100E - On Axis gain of 1.1. Diffuse white coating over a grey base material. Recommended for use with low to moderate light output digital projectors, where some provision for light control exists.

\*\* 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. NTSC Format (4:3). Black masking borders standard.

6 foot (1.83 m) diagonal, 42-1/2 inches x 56-1/2 inches (1080 mm x 1435 mm).

7 foot (2.13 m) diagonal, 50 inches x 66-1/2 inches (1270 mm x 1689 mm).

100 inch (2540 mm) diagonal, 60 inches x 80 inches (1524 mm x 2032 mm).

10 foot (3.05 m) diagonal, 69 inches x 92 inches (1753 mm x 2337 mm).

11 foot (3.35 m) diagonal, 78 inches x 104 inches (1981 mm x 2642 mm).

150 inch (3810 mm) diagonal, 87 inches x 116 inches (2210 mm x 3658 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. 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. Custom Size: \_\_\_\_\_\_\_\_ H x \_\_\_\_\_\_\_\_\_\_\_\_ W.

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop is required for the project fill in the drop height and select one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). Select viewing surface color or black. Matching the viewing surface is standard for AV format, black is standard for all other formats. If extra screen drop is 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 top border.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the paragraph not required.

* + - 1. Provide with optional 4 foot (1.22 m) aluminum operating pole.
			2. Provide with optional 6 foot (1.83 m) aluminum operating pole.
	1. MOTORIZED, CEILING RECESSED, FRONT PROJECTION SCREENS
		1. Access XL/Series E: Electric motor operated, extruded aluminum case. Case size 10-7/16 inches (265 mm) deep and 9 inches (229 mm) wide. Extruded aluminum housing with white paint finish and stamped 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. Housing is symmetrical allowing for left and right hand motor locations and for viewing surface to unroll off front or back of roller. Provided with internal junction box and plug-in wiring connections.

\*\* NOTE TO SPECIFIER \*\* Available with IR and/or RF remote control.

* + - 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 with overload protection and electric brake.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

* + - * 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 \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			1. Projection Viewing Surface:
				1. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.

\*\* 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. NTSC Format (4:3). Black masking borders standard.

250 inches (635 cm) diagonal, 148 inches x 198 inches (376 x 503 cm).

270 inches (686 cm) diagonal, 162 inches x 216 inches (411 x 549 cm).

295 inches (749 cm) diagonal, 177 inches x 236 inches (450 x 599 cm).

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

248 inches (630 cm) diagonal, 121-1/2 inches x 216 inches (309 x 549 cm).

270 inches (686 cm) diagonal, 133 inches x 236 inches (338 x 599 cm).

* + - * 1. 16:10 Format. Black masking borders standard.

255 inches (648 cm) diagonal, 135 inches x 216 inches (343 x 549 cm).

278 inches (706 cm) diagonal, 147-1/2 inches x 236 inches (375 x 599 cm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop is required for the project. Black drop is standard for all formats except AV format which matches screen surface color. Fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is 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.
		1. Access XL/Series V: Electric motor operated, extruded aluminum housing, tab tensioned. Case size 10-7/16 inches (265 mm) deep and 9 inches (229 mm) wide. Extruded aluminum housing with white paint finish and stamped 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 or for trim for gypsum board ceilings. Housing is symmetrical allowing for left and right hand motor locations and for viewing surface to unroll off front or back of roller. Provided with internal junction box and plug-in wiring connections to allow housing.

\*\* NOTE TO SPECIFIER \*\* Select one of the following four motor paragraphs and delete the paragraphs 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 with overload protection and electric brake.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			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. Matt White XT1000 - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Available with or without black backing.
				2. Pure White XT1300V - On Axis gain of 1.3. 180 degree viewing cone. For use in situations where lighting is well controlled and where enhanced brightness is needed due to limited projector brightness. Available with or without black backing.
				3. Grey XH600V - On Axis gain of 0.6. Provides excellent contrast and color reproduction. GREENGUARD Gold certified. Maximum size 9 feet by 12 feet (275 cm x 366 cm). Available with or without black backing.
				4. Pearl White MH1500V - On Axis gain of 1.5. Matt white surface with reflective pearlescent coating and black backing. Maximum size 9 feet by 12 feet (275 cm x 366 cm).
				5. ClearSound NanoPerf XT800V - On Axis gain of 0.8. 180 degree viewing cone. Acoustically transparent white PVC fabric with microscopic perforations. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				6. ClearSound Perf XT900V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent. Flexible matt white perforated surface. Reasonable control of ambient light is recommended. Not recommended for use in sizes less than 80 inches (203 cm) by wide. Not recommended for viewing less than 20 feet (610 cm) from screen.
				7. TecVision XH700X Grey - On Axis gain of 0.7. 180 degree viewing cone. Designed for blending applications on curved or flat screens where ambient light is present. Provides very good contrast and color reproduction. Imaging Science Foundation certified and 4K ready. 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 4K ready. Dark backing.
				9. TecVision XH900X Grey - On Axis gain of 0.9. 180 degree viewing cone. Provides very good contrast and color reproduction. 4K ready. Dark backing.
				10. TecVision MS1000X Grey - 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. 4K ready. Dark backing.
				11. TecVision XT1000X White - On Axis gain of 1.0. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready reference screen surface for blending applications, precise resolution, and color accuracy. Dark backing.
				12. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				13. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				14. TecVision XT1800X White - On Axis gain of 1.8. 180 degree viewing cone. Imaging Science Foundation certified. Suited for active 3D or color combining passive 3D systems. 4K ready. Dark backing.
				15. 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.
				16. CineFlex XT600V - On Axis gain of 0.6. 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.
				17. CineFlex MH800V - On Axis gain of 0.8. 78 degree viewing cone. Low gain flexible rear material. Designed for use with high light output projectors and wide audience seating patterns.
			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. Warranted for 5 years against tab separation. 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. NTSC Format (4:3). Black masking borders standard.

250 inches (635 cm) diagonal, 148 inches x 198 inches (376 cm x 503 cm).

270 inches (686 cm) diagonal, 162 inches x 216 inches (411 cm x 549 cm).

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

248 inches (630 cm) diagonal, 121-1/2 inches x 216 inches (309 cm x 549 cm).

* + - * 1. 16:10. Black masking borders standard.

255 inches (648 cm) diagonal, 135 inches x 216 inches (343 cm x 549 cm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop exceeding the standard of 12 inches (305 mm) is required for the project. Black is standard for all formats. Note that extra drop will increase the overall length of the case. Select the screen drop type and fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is not required, delete both paragraphs.

* + - 1. Provide an extra screen drop with an overall screen drop of \_\_\_ inches (\_\_\_ mm) with top border matching viewing surface color.
			2. Provide an extra screen drop with an overall screen drop of \_\_\_ inches (\_\_\_ mm) with a black masking top border.
		1. Paragon/Series V: Large electrically operated, tab tensioned, extruded aluminum case. Projection screen with motor in roller. Case fully enclosed except for slot allowing viewing surface passage. Roller: 6 inches (152 mm) diameter steel tube. Viewing surface securely attached to roller at top and at bottom to weighted dowel. Provided with universal mounting brackets for ceiling or above ceiling mounting.
			1. Motor UL certified, rated 110-120V AC, 60 Hz, three wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches.

\*\* NOTE TO SPECIFIER \*\* If wall mounting this screen, optional wall mounting brackets are available. Delete the following paragraph if wall mounting brackets are not required.

* + - 1. Wall Mounting Bracket Kit: Kit includes two structural steel brackets and hardware to attach brackets to case. Hardware for mounting to wall structure by others.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project and delete those not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			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. Matt White XT1000V - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Available with or without black backing.
				2. Pure White XT1300V - On Axis gain of 1.3. 180 degree viewing cone. For use in situations where lighting is well controlled and where enhanced brightness is needed due to limited projector brightness. Available with or without black backing.
				3. ClearSound Perf XT900V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent. Flexible matt white perforated surface. Reasonable control of ambient light is recommended. Not recommended for use in sizes less than 80 inches (203 cm) by wide. Not recommended for viewing less than 20 feet (610 cm) from screen.
				4. TecVision XH700X Grey - On Axis gain of 0.7. 180 degree viewing cone. Designed for blending applications on curved or flat screens where ambient light is present. Provides very good contrast and color reproduction. Imaging Science Foundation certified and 4K ready. Dark backing.
				5. 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 4K ready. Dark backing.
				6. TecVision XH900X Grey - On Axis gain of 0.9. 180 degree viewing cone. Provides very good contrast and color reproduction. Imaging Science Foundation certified. 4K ready. Dark backing.
				7. TecVision MS1000X Grey - 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. 4K ready. Dark backing.
				8. TecVision XT1000X White - On Axis gain of 1.0. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready reference screen surface for blending applications, precise resolution, and color accuracy. Dark backing.
				9. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				10. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				11. TecVision XT1800X White - On Axis gain of 1.8. 180 degree viewing cone. Imaging Science Foundation certified. Suited for active 3D or color combining passive 3D systems. 4K ready. Dark backing.
				12. CineFlex XT600V - On Axis gain of 0.6. 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.
				13. CineFlex MH800V - On Axis gain of 0.8. 78 degree viewing cone. Low gain flexible rear material. Designed for use with high light output projectors and wide audience seating patterns.
				14. 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.
			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. Warranted for 5 years against tab separation. 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. NTSC Format (4:3). Black masking borders standard.

250 inch (6.35 m) diagonal, 148 inches x 198 inches (3759 mm x 5029 mm).

30 foot (9.14 m) diagonal, 212 inches x 284 inches (5385 mm x 7214 mm).

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

324 inch (8230 mm) diagonal, 160 inches x 284 inches (4064 mm x 5994 mm).

* + - * 1. 16:10 Format. Black masking borders standard.

335 inch (8230 mm) diagonal, 177 inches x 284 inches (4496 mm x 5994 mm).

\*\* NOTE TO SPECIFIER \*\* If an extra screen drop is required for the project, fill in the drop height and select the screen border type from one of the following paragraphs and delete the other. Total screen height cannot exceed 24 feet (7.31 m). 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.
		1. Access/Series V: Electric motor operated, steel case. Ceiling-recessed, 18-gauge steel headbox, 6-1/2 inches (182 mm) deep and 6-13/16 inches (182 mm) wide 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. The Access case may be ordered in advance and the screen installed later to eliminate field damage. The screen installs in minutes. Housing is symmetrical allowing for left and right 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 the top of the 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.

\*\* NOTE TO SPECIFIER \*\* Select one of the following motor paragraphs and delete the paragraphs 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.
			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.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project and delete those not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			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. Matt White XT1000V - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Available with or without black backing.
				2. Pure White XT1300V - On Axis gain of 1.3. 180 degree viewing cone. For use in situations where lighting is well controlled and where enhanced brightness is needed due to limited projector brightness. Available with or without black backing.
				3. Grey XH600V - On Axis gain of 0.6. Provides excellent contrast and color reproduction. GREENGUARD Gold certified. Maximum size 9 feet by 12 feet (275 cm x 366 cm). Available with or without black backing.
				4. Pearl White MH1500V - On Axis gain of 1.5. Matt white surface with reflective pearlescent coating with black backing. Maximum size 9 feet by 12 feet (275 cm x 366 cm).
				5. ReAct MS1000V - On Axis gain of 1.0. 60 degree viewing cone. Silver/grey surface provides superior performance in ambient light conditions, offers excellent contrast, optimal color rendition, and is fully HD compliant. Maximum size 79 inches by 140 inches (201 cm x 356 cm).
				6. ClearSound NanoPerf XT800V - On Axis gain of 0.8. 180 degree viewing cone. Acoustically transparent white PVC fabric with microscopic perforations. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				7. ClearSound Perf XT900V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent. Flexible matt white perforated surface. Reasonable control of ambient light is recommended. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 20 feet (610 cm) from screen.
				8. TecVision XH700X Grey - On Axis gain of 0.7. 180 degree viewing cone. Designed for blending applications on curved or flat screens where ambient light is present. Provides very good contrast and color reproduction. Imaging Science Foundation certified and 4K ready. Dark backing.
				9. 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 4K ready. Dark backing.
				10. TecVision XH900X Grey - On Axis gain of 0.9. 180 degree viewing cone. Provides very good contrast and color reproduction. Imaging Science Foundation certified. 4K ready. Dark backing.
				11. TecVision MS1000X Grey - 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. 4K ready. Dark backing.
				12. TecVision XT1000X White - On Axis gain of 1.0. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready reference screen surface for blending applications, precise resolution, and color accuracy. Dark backing.
				13. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				14. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				15. TecVision XT1800X White - On Axis gain of 1.8. 180 degree viewing cone. Imaging Science Foundation certified. Suited for active 3D or color combining passive 3D systems. 4K ready. Dark backing.
				16. 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.
				17. CineFlex XT600V - On Axis gain of 0.6. 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.
				18. CineFlex MH800V - On Axis gain of 0.8. 78 degree viewing cone. Low gain flexible rear material. Designed for use with high light output projectors and wide audience seating patterns.
			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. Warranted for 5 years against tab separation.

\*\* 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. NTSC Format (4:3). Black masking borders standard.

150 inch (3810 mm) diagonal, 87 inches x 116 inches (2210 mm x 3658 mm).

15 foot (4.57 m) diagonal, 108 inches x 144 inches (2743 mm x 3658 mm).

200 inch (5.08 m) diagonal, 118 inches x 158 inches (2997 mm x 4013 mm).

210 inches (534 cm) diagonal, 126 inches x 168 inches (300 cm x 427 cm).

220 inches (559 cm) diagonal, 132 inches x 176 inches (335 cm x 447 cm).

240 inches (610 cm) diagonal, 144 inches x 192 inches (366 cm x 488 cm).

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

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

161 inch (4089 mm) diagonal, 80 inches x 140 inches (2032 mm x 3556 mm).

184 inch (4674 mm) diagonal, 90 inches x 160 inches (2286 mm x 4064 mm).

193 inches (490 cm diagonal, 94-1/2 inches x 168 inches (240 cm x 427 cm).

220 inches (559 cm) diagonal, 108 inches x 192 inches (274 cm x 488 cm).

* + - * 1. 16:10 Format. Black masking borders standard.

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

165 inch (4191 mm) diagonal, 87-1/2 inches x 140 inches (2223 mm by 3556 mm).

189 inch (4800 mm) diagonal, 100 inches x 160 inches (2540 mm x 4064 mm).

198 inches (503 cm) diagonal, 105 inches x 168 inches (267 cm x 427 cm).

226 inches (574 cm) diagonal, 120 inches x 192 inches (305 cm x 488 cm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop exceeding the standard of 12 inches (305 mm) is required for the project. Black is standard for all formats. Note that extra drop will increase the overall length of the case. Select the screen drop type and fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is not required, delete both paragraphs.

* + - 1. Provide an extra screen drop with an overall screen drop of \_\_\_ inches (\_\_\_ mm) with top border matching viewing surface color.
			2. Provide an extra screen drop with an overall screen drop of \_\_\_ inches (\_\_\_ mm) with a black masking top border.
		1. Ultimate Access/Series V: Electric motor operated, metal case, independently motorized closure, tab tensioned. Ceiling-recessed, metal headbox, 10 inches (254 mm) high and 8 inches (229 mm) deep. UL approved "Suitable for use in environmental air space." Case finished white. Bottom of case consists of an independently motorized trap door that opens up inside the screen case. The trap door and the access door both hinge downward to allow access to inside of screen case. The doors remain attached to the screen case via a concealed full-length hinge. Releasing one latch at each end of screen case allows the doors to hinge downward and a prop arm at each end may be pivoted to engage with endcaps, keeping the door assembly in its fully open position. Symmetrical case allows for viewing surface to unroll from the back or front of the roller. The screen is attached to roller with roller brackets. The Ultimate Access case may be ordered in advance and the screen installed later to eliminate field damage. The screen installs in minutes. Metal roller mounted on rubber isolation mounts.

\*\* 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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.
			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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

* + - * 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 \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Left motor location is standard. Right hand is optional (screen will be reverse rolled). Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted (screen will be reverse rolled).
				2. Motor shall be left mounted.
			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. Matt White XT1000V - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Available with or without black backing.
				2. Pure White XT1300V - On Axis gain of 1.3. 180 degree viewing cone. For use in situations where lighting is well controlled and where enhanced brightness is needed due to limited projector brightness. Available with or without black backing.
				3. ClearSound NanoPerf XT800V - On Axis gain of 0.8. 180 degree viewing cone. Acoustically transparent white PVC fabric with microscopic perforations. Not recommended for use in sizes less than 80 inches (203 cm) wide or for viewing less than 10 feet (305 cm) from screen.
				4. ClearSound Perf XT900V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent. Flexible matt white perforated surface. Reasonable control of ambient light is recommended. Not recommended for use in sizes less than 80 inches (203 cm) wide or for viewing less than 20 feet (610 cm) from screen.
				5. TecVision XH700X Grey - On Axis gain of 0.7. 180 degree viewing cone. Designed for blending applications on curved or flat screens where ambient light is present. Provides very good contrast and color reproduction. Imaging Science Foundation certified and 4K ready. Dark backing.
				6. 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 4K ready. Dark backing.
				7. TecVision XH900X Grey - On Axis gain of 0.9. 180 degree viewing cone. Provides very good contrast and color reproduction. Imaging Science Foundation certified. 4K ready. Dark backing.
				8. TecVision MS1000X Grey - 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. 4K ready. Dark backing.
				9. TecVision XT1000X White - On Axis gain of 1.0. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready reference screen surface for blending applications, precise resolution, and color accuracy. Dark backing.
				10. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				11. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				12. TecVision XT1800X White - On Axis gain of 1.8. 180 degree viewing cone. Imaging Science Foundation certified. Suited for active 3D or color combining passive 3D systems. 4K ready. Dark backing.
				13. 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.
				14. CineFlex XT600V - On Axis gain of 0.6. 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.
				15. CineFlex MH800V - On Axis gain of 0.8. 78 degree viewing cone. Low gain flexible rear material. Designed for use with high light output projectors and wide audience seating patterns.
			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 vi ewing surface to prevent tab separation. Tab adhesives are not acceptable. Viewing surface inserted into aluminum bottom dowel. Warranted for 5 years against tab separation.

\*\* 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. NTSC Format (4:3). Black masking borders and 12 inches (305 mm) extra black drop are standard.

6 foot (1.83 m) diagonal, 42-1/2 inches x 56-1/2 inches (1080 mm x 1435 mm).

7 foot (2.13 m) diagonal, 50 inches x 66-1/2 inches (1270 mm x 1689 mm).

100 inch (2540 mm) diagonal, 60 inches x 80 inches (1524 mm x 2032 mm).

10 foot (3.05 m) diagonal, 72 inches x 96 inches (1829 mm x 2438 mm).

11 foot (3.35 m) diagonal, 78 inches x 104 inches (1981 mm x 2642 mm).

150 inch (3810 mm) diagonal, 87 inches x 116 inches (2210 mm x 3658 mm).

15 foot (4.57 m) diagonal, 108 inches x 144 inches (2743 mm x 3658 mm).

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case sizes.

* + - * 1. HDTV Format (16:9). Black masking borders and 12 inches (305 mm) extra black drop are 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).

161 inch (4089 mm) diagonal, 79 inches x 140 inches (2007 mm x 3556 mm).

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case sizes.

* + - * 1. 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).

165 inch (4191 mm) diagonal, 87-1/2 inches x 140 inches (2223 mm by 3556 mm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop exceeding the standard of 12 inches (305 mm) is required for the project. Black is standard for all formats, viewing surface color is optional. Note that extra drop will increase the overall length of the case. Select the screen drop type and fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is 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.
		1. Ultimate Access XL/Series V: Electric motor operated, metal case, independently motorized closure, tab tensioned. Ceiling-recessed, metal headbox, 14-11/16 inches (373 mm) high by 11 inches (279 mm) deep. UL approved "Suitable for use in environmental air space." Case finished white. Bottom of case consists of an independently motorized trap door that opens up inside the screen case. The trap door and the access door both hinge downward to allow access to inside of screen case. The doors remain attached to the screen case via a concealed full-length hinge. Releasing one latch at each end of screen case allows the doors to hinge downward and a prop arm at each end may be pivoted to engage with endcaps, keeping the door assembly in its fully open position. Symmetrical case allows for viewing surface to unroll from the back or front of the roller. The screen is attached to roller with roller brackets. The screen installs in minutes. Metal roller mounted on rubber isolation mounts.

\*\* 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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.
			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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

* + - * 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 \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through i.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Left motor location is standard. Right hand is optional (screen will be reverse rolled). Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted (screen will be reverse rolled).
				2. Motor shall be left mounted.
			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. Matt White XT1000V - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Available with or without black backing.
				2. Pure White XT1300V - On Axis gain of 1.3. 180 degree viewing cone. For use in situations where lighting is well controlled and where enhanced brightness is needed due to limited projector brightness. Available with or without black backing.
				3. ClearSound NanoPerf XT800V - On Axis gain of 0.8. 180 degree viewing cone. Acoustically transparent white PVC fabric with microscopic perforations. Not recommended for use in sizes less than 80 inches (203 cm) wide or for viewing less than 10 feet (305 cm) from screen.
				4. ClearSound Perf XT900V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent. Flexible matt white perforated surface. Reasonable control of ambient light is recommended. Not recommended for use in sizes less than 80 inches (203 cm) wide or for viewing less than 20 feet (610 cm) from screen.
				5. TecVision XH700X Grey - On Axis gain of 0.7. 180 degree viewing cone. Designed for blending applications on curved or flat screens where ambient light is present. Provides very good contrast and color reproduction. Imaging Science Foundation certified and 4K ready. Dark backing.
				6. 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 4K ready. Dark backing.
				7. TecVision XH900X Grey - On Axis gain of 0.9. 180 degree viewing cone. Provides very good contrast and color reproduction. Imaging Science Foundation certified. 4K ready. Dark backing.
				8. TecVision MS1000X Grey - 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. 4K ready. Dark backing.
				9. TecVision XT1000X White - On Axis gain of 1.0. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready reference screen surface for blending applications, precise resolution, and color accuracy. Dark backing.
				10. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				11. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				12. TecVision XT1800X White - On Axis gain of 1.8. 180 degree viewing cone. Imaging Science Foundation certified. Suited for active 3D or color combining passive 3D systems. 4K ready. Dark backing.
				13. 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.
				14. CineFlex XT600V - On Axis gain of 0.6. 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.
				15. CineFlex MH800V - On Axis gain of 0.8. 78 degree viewing cone. Low gain flexible rear material. Designed for use with high light output projectors and wide audience seating patterns.
			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 vi ewing surface to prevent tab separation. Tab adhesives are not acceptable. Viewing surface inserted into aluminum bottom dowel. Warranted for 5 years against tab separation.

\*\* 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. NTSC Format (4:3). Black masking borders and 12 inches (305 mm) extra black drop are standard.

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case sizes.

200 inches (5.08 m) diagonal, 118 inches x 158 inches (2997 mm x 4013 mm).

210 inches (5.33 m) diagonal, 126 inches x 168 inches (3200 mm x 4267 mm).

220 inches (5.59 m) diagonal, 132 inches x 176 inches (3353 mm x 4470 mm).

230 inches (5.84 m) diagonal, 138 inches x 184 inches (3505 mm x 4674 mm).

240 inches (6.10 m) diagonal, 144 inches x 192 inches (3658 mm x 4877 mm).

25 foot (7.62 m) diagonal, 177 inches x 236 inches (4496 mm x 5994 mm).

27-1/2 foot (8.38 m) diagonal, 199 inches x 264 inches (5054 mm x 6706 mm).

* + - * 1. HDTV Format (16:9). Black masking borders and 12 inches (305 mm) extra black drop are standard.

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case sizes.

184 inches (4.67 m) diagonal, 90 x 160 inches (2286 mm x 4064 mm).

193 inches (4.90 m) diagonal, 94-1/2 inches x 168 inches (2400 mm x 4267 mm).

220 inches (5.59 m) diagonal, 108 inches x 192 inches (2743 mm x 4877 mm).

227 inch (5766 mm) diagonal, 111 inches x 198 inches (2819 mm x 5029 mm).

248 inches (630 cm) diagonal, 121 1/2 inches x 216 inches (309 cm x 549 cm).

270 inch (6858 mm) diagonal, 133 inch by 236 inches (3378 mm by 5994 mm).

300 inch (7620 mm) diagonal, 146 inches x 260 inches (3708 mm x 6604 mm).

* + - * 1. 16:10 Format. Black masking borders standard.

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case sizes.

189 inch (4800 mm) diagonal, 100 inches x 160 inches (2540 mm x 4064 mm).

198 inch (5029 mm) diagonal, 105 inches x 168 inches (2667 mm x 4267 mm).

226 inch (5740 mm) diagonal, 120 inches x 192 inches (3048 mm x 4877 mm).

234 inch (5944 mm) diagonal, 124 inches x 198 inches (3150 mm x 5029 mm).

255 inches (648 cm) diagonal, 135 inches x 216 inches (343 cm x 549 cm).

278 inch diagonal (7061 mm), 147 inches x 236 inches (3734 mm x 5994 mm).

307 inch (7798 mm) diagonal, 162 inches x 260 inches (4115 mm x 6604 mm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop exceeding the standard of 12 inches (305 mm) is required for the project. Black is standard for all formats, viewing surface color is optional. Note that extra drop will increase the overall length of the case. Select the screen drop type and fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is 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.
		1. Access/Series E: Electric motor operated, steel case. Ceiling-recessed, 18-gauge steel headbox, 6-1/2 inches (182 mm) deep and 6-13/16 inches (182 mm) wide 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. The Access case may be ordered in advance and the screen installed later to eliminate field damage. The screen installs in minutes. Housing is symmetrical allowing for left and right 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 the top of the 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.

\*\* NOTE TO SPECIFIER \*\* Select one of the following motor paragraphs and the associated control paragraph as required and delete the paragraphs 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.
			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.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

* + - * 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 \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			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. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.
				2. 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).
				3. ClearSound Perf XT950E - On Axis gain of 0.95. 180 degree viewing cone. Acoustically transparent. Textile backed matt white perforated surface. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 20 feet (610 cm) from screen.
				4. 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 use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				5. ClearSound Grey Weave XH600E - On Axis gain of 0.6. 180 degree viewing cone. Acoustically transparent woven blend of fiberglass and PVC. Grey material for higher contrast. Acoustical properties are comparable to the highest quality speaker grille cloth. Flame and mildew resistant. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.

\*\* 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. NTSC Format (4:3). Black masking borders standard.

15 foot (4.57 m) diagonal, 105 inches x 140 inches (2667 mm x 3556 mm).

200 inch (5080 mm) diagonal, 118 inches x 158 inches (2997 mm x 4013 mm).

210 inches (534 cm) diagonal, 126 inches x 168 inches (320 x 427 cm).

220 inches (559 cm) diagonal, 132 inches x 176 inches (335 x 447 cm).

240 inches (610 cm) diagonal, 141 inches x 188 inches (358 x 478 cm).

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

161 inch (4089 mm) diagonal, 79 inches x 140 inches (2007 mm x 3556 mm).

184 inch (4674 mm) diagonal, 90 inches x 160 inches (2286 mm x 4064 mm).

193 inches (490 cm) diagonal, 94-1/2 inches x 168 inches (240 x 427 cm).

220 inches (559 cm) diagonal, 106 inches x 188 inches (269 x 478 cm).

* + - * 1. 16:10 Format. Black masking borders standard.

165 inch (4191 mm) diagonal, 87-1/2 inches x 140 inches (2223 mm by 3556 mm).

189 inch (4800 mm) diagonal, 100 inches x 160 inches (2540 mm x 4064 mm).

198 inches (503 cm) diagonal, 105 inches x 168 inches (267 x 427 cm).

222 inches (564 cm) diagonal, 117-1/2 inches x 188 inches (298 x 478 cm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop is required for the project. Black drop is standard for all formats except AV format which matches screen surface color. Fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is 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.
		1. Ultimate Access/Series E: Electric motor operated, metal case, independently motorized closure. Ceiling-recessed, metal headbox, 10 inches (254 mm) high and 8 inches (229 mm) deep. UL approved "Suitable for use in environmental air space." Case finished white. Bottom of case consists of an independently motorized trap door that opens up inside the screen case. The trap door and the access door both hinge downward to allow access to inside of screen case. The doors remain attached to the screen case via a concealed full-length hinge. Releasing one latch at each end of screen case allows the doors to hinge downward and a prop arm at each end may be pivoted to engage with endcaps, keeping the door assembly in its fully open position. Symmetrical case allows for viewing surface to unroll from the back or front of the roller. The screen is attached to roller with roller brackets. Ultimate Access case may be ordered in advance and the screen installed later to eliminate field damage. The screen installs in minutes. Metal roller mounted on rubber isolation mounts.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two 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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.
			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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Left hand motor location is standard. Right hand location is optional (screen will be reverse rolled). Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted (screen will be reverse rolled).
				2. Motor shall be left mounted.
			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. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.
				2. Argent White XH1500E - On Axis gain of 1.5. High reflectivity fabric with broad viewing cone. Excellent resolution and color balance. Flame and Mildew resistant. Maximum size 8 feet by 10 feet (244 cm x 305 cm).
				3. Pearl White CH1900E - On Axis gain of 1.9. Matt white surface with reflective pearlescent coating. Maximum size 96 inches by 96 inches (244 cm x 244 cm).
				4. Contrast White XH1100E - On Axis gain of 1.1. Diffuse white coating over a grey base material. Recommended for use with low to moderate light output digital projectors, where some provision for light control exists. Maximum size 8 feet by 10 feet (244 cm x 305 cm).
				5. 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.
				6. ClearSound Perf XT950E - On Axis gain of 0.95. 180 degree viewing cone. Acoustically transparent. Textile backed matt white perforated surface. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 20 feet (610 cm) from screen.
				7. 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 use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				8. ClearSound Grey Weave XH600E - On Axis gain of 0.6. 180 degree viewing cone. Acoustically transparent woven blend of fiberglass and PVC. Grey material for higher contrast. Acoustical properties are comparable to the highest quality speaker grille cloth. Flame and mildew resistant. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				9. Chroma Key Blue - Blue 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.
				10. 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.

\*\* 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. NTSC Format (4:3). Black masking borders and 12 inches (305 mm) extra black drop are standard.

6 foot (1.83 m) diagonal, 42-1/2 inches x 56-1/2 inches (1080 mm x 1435 mm).

7 foot (2.13 m) diagonal, 50 inches x 66-1/2 inches (1270 mm x 1689 mm).

100 inch (2540 mm) diagonal, 60 inches x 80 inches (1524 mm x 2032 mm).

10 foot (3.05 m) diagonal, 72 inches x 96 inches (1829 mm x 2438 mm).

11 foot (3.35 m) diagonal, 78 inches x 104 inches (1981 mm x 2642 mm).

150 inch (3810 mm) diagonal, 87 inches x 116 inches (2210 mm x 3658 mm).

15 foot (4.57 m) diagonal, 108 inches x 144 inches (2743 mm x 3658 mm).

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case size.

* + - * 1. HDTV Format (16:9). Black masking borders and 12 inches (305 mm) extra black drop are 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).

161 inch (4089 mm) diagonal, 79 inches x 140 inches (2007 mm x 3556 mm).

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case size.

* + - * 1. 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).

165 inch (4191 mm) diagonal, 87-1/2 inches x 140 inches (2223 mm by 3556 mm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop exceeding the standard of 12 inches (305 mm) is required for the project. Black is standard for all formats, viewing surface color is optional. Note that extra drop will increase the overall length of the case. Select the screen drop type and fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is 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.
		1. Ultimate Access XL/Series E: Electric motor operated, metal case, independently motorized closure. Ceiling-recessed, metal headbox, 14-11/16 inches (373 mm) high by 11 inches (279 mm) deep. UL approved "Suitable for use in environmental air space." Case finished white. Bottom of case consists of an independently motorized trap door that opens up inside the screen case. The trap door and the access door both hinge downward to allow access to inside of screen case. The doors remain attached to the screen case via a concealed full-length hinge. Releasing one latch at each end of screen case allows the doors to hinge downward and a prop arm at each end may be pivoted to engage with endcaps, keeping the door assembly in its fully open position. Symmetrical case allows for viewing surface to unroll from the back or front of the roller. The screen is attached to roller with roller brackets. The screen installs in minutes. Metal roller mounted on rubber isolation mounts.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two 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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.
			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, five wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches. Motor with overload protection and electric brake. Motor shall be left mounted.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through i.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Left hand motor location is standard. Right hand location is optional (screen will be reverse rolled). Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted (screen will be reverse rolled).
				2. Motor shall be left mounted.
			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. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.
				2. Argent White XH1500E - On Axis gain of 1.5. High reflectivity fabric with broad viewing cone. Excellent resolution and color balance. Flame and Mildew resistant. Maximum size 8 feet by 10 feet (244 cm x 305 cm).
				3. Pearl White CH1900E - On Axis gain of 1.9. Matt white surface with reflective pearlescent coating. Maximum size 96 inches by 96 inches (244 cm x 244 cm).
				4. Contrast White XH1100E - On Axis gain of 1.1. Diffuse white coating over a grey base material. Recommended for use with low to moderate light output digital projectors, where some provision for light control exists. Maximum size 8 feet by 10 feet (244 cm x 305 cm).
				5. 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.
				6. ClearSound Perf XT950E - On Axis gain of 0.95. 180 degree viewing cone. Acoustically transparent. Textile backed matt white perforated surface. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 20 feet (610 cm) from screen.
				7. 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 use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				8. ClearSound Grey Weave XH600E - On Axis gain of 0.6. 180 degree viewing cone. Acoustically transparent woven blend of fiberglass and PVC. Grey material for higher contrast. Acoustical properties are comparable to the highest quality speaker grille cloth. Flame and mildew resistant. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				9. Chroma Key Blue - Blue 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.
				10. 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.

\*\* 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. NTSC Format (4:3). Black masking borders and 12 inches (305 mm) extra black drop are standard.

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case size.

200 inch (5.08 m) diagonal, 118 inches x 158 inches (2997 mm x 4013 mm).

210 inch (5.33 m) diagonal, 126 inches x 168 inches (3200 mm x 4267 mm).

220 inch (5.59 m) diagonal, 132 inches x 176 inches (3353 mm x 4470 mm).

230 inch (5.84 m) diagonal, 138 inches x 184 inches (3505 mm x 4674 mm).

240 inch (6.10 m) diagonal, 141 inches x 188 inches (3581 mm x 4775 mm).

250 inch (6.35 m) diagonal, 148 inches x 198 inches (3759 mm x 5029 mm).

270 inch (686 cm) diagonal, 162 inches x 216 inches (411 x 549 cm).

295 inch (7.62 m) diagonal, 177 inches x 236 inches (4496 mm x 5994 mm).

27-1/2 foot (8.38 m) diagonal, 194 inches x 260 inches (4928 mm x 6604 mm).

* + - * 1. HDTV Format (16:9). Black masking borders and 12 inches (305 mm) extra black drop are standard.

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case size.

184 inches (4.67 m) diagonal, 90 x 160 inches (2286 mm x 4064 mm).

193 inches (4.90 m) diagonal, 94-1/2 inches x 168 inches (2400 mm x 4267 mm).

220 inches (5.59 m) diagonal, 106 inches x 188 inches (2692 mm x 4775 mm).

248 inches (630 cm) diagonal, 121 1/2 inches x 216 inches (309 cm x 549 cm).

270 inch (6858 mm) diagonal, 133 inch by 236 inches (3378 mm by 5994 mm).

300 inch (7620 mm) diagonal, 146 inches x 260 inches (3708 mm x 6604 mm).

* + - * 1. 16:10 Format. Black masking borders standard.

\*\* NOTE TO SPECIFIER \*\* Note that the following sizes require the larger case size.

189 inch (4800 mm) diagonal, 100 inches x 160 inches (2540 mm x 4064 mm).

198 inch (5029 mm) diagonal, 105 inches x 168 inches (2667 mm x 4267 mm).

222 inch (5638 mm) diagonal, 117-1/2 inches x 188 inches (2985 mm x 4775 mm).

255 inches (648 cm) diagonal, 135 inches x 216 inches (343 cm x 549 cm).

278 inch diagonal (7061 mm), 147-1/2 inches x 236 inches (3747 mm x 5994 mm).

307 inch (7798 mm) diagonal, 162-1/2 inches x 260 inches (4128 mm x 6604 mm).

\*\* NOTE TO SPECIFIER \*\* Edit the following if an extra screen drop exceeding the standard of 12 inches (305 mm) is required for the project. Black is standard for all formats, viewing surface color is optional. Note that extra drop will increase the overall length of the case. Select the screen drop type and fill in the drop height from one of the following paragraphs and delete the other. Total screen height cannot exceed 12 feet (3.66 m). If extra screen drop is 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.
		1. Paragon/Series E: Large electrically operated, extruded aluminum case. Projection screen with motor in roller. Case fully enclosed except for slot allowing viewing surface passage. Roller: 6 inches (152 mm) diameter steel tube. Viewing surface securely attached to roller at top and at bottom to weighted dowel. Provided with universal mounting brackets for wall, ceiling or above ceiling mounting. The viewing surface is concealed when not in use; lower it to any position at the touch of a switch.
			1. Motor UL certified, rated 110-120V AC, 60 Hz, three wire, instantly reversible, lifetime lubricated with pre-set accessible limit switches.

\*\* NOTE TO SPECIFIER \*\* If wall mounting this screen, optional wall mounting brackets are available. Delete the following paragraph if wall mounting brackets are not required.

* + - 1. Wall Mounting Bracket Kit: Kit includes two structural steel brackets and hardware to attach brackets to case. Hardware for mounting to wall structure by others

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

* + - * 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 \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			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. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.
				2. ClearSound Perf XT950E - On Axis gain of 0.95. 180 degree viewing cone. Acoustically transparent. Textile backed matt white perforated surface. Not recommended for use in sizes less than 80 inches wide. Not recommended for viewing less than 20 feet from screen.

\*\* 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. NTSC Format (4:3). Black masking borders standard.

25 foot (7.62 m) diagonal, 177 inches x 236 inches (4496 mm x 5994 mm).

30 foot (9.14 m) diagonal, 212 inches x 284 inches (5385 mm x 7214 mm).

32-1/2 foot (991 m) diagonal, 230 inches x 308 inches (5842 mm x 7823 mm).

35 foot (10.67 m) diagonal, 248 inches x 332 inches (6299 mm x 8433 mm).

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

270 inch (6858 mm) diagonal, 133 inches x 236 inches (3378 mm x 5994 mm).

324 inch (8230 mm) diagonal, 160 inches x 284 inches (4216 mm x 7214 mm).

354 inch (8992 mm) diagonal, 173 inches x 308 inches (4392 mm x 7823 mm).

384 inch (9754 mm) diagonal, 187 inches x 332 inches (4750 mm x 8433 mm).

* + - * 1. 16:10 Format. Black masking borders standard.

278 inch (7061mm) diagonal, 147-1/2 inches x 236 inches (3747 mm x 5994 mm).

335 inch (2159 mm) diagonal, 177-1/2 inches x 284 inches (4508 mm x 7214 mm).

363 inch (2769 mm) diagonal, 192-1/2 inches x 308 inches (4890 mm x 7823 mm).

392 inch (3480) diagonal, 207-1/2 inches x 332 inches (5270 mm by 8433 mm).

\*\* NOTE TO SPECIFIER \*\* If an extra screen drop is required for the project, fill in the drop height and select the screen border type from one of the following paragraphs and delete the other. Total screen height cannot exceed 24 feet (7.31 m). 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.
		1. Access Fit/Series E: Electric motor operated, steel case. Ceiling-recessed, 18-gauge steel headbox, 5-1/8 inches (130 mm) deep and 4-7/8 inches (124 mm) wide 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. The Access Fit case may be ordered in advance and the screen installed later to eliminate field damage. The screen installs in minutes. Housing is symmetrical allowing for left and right 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 the top of the 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.

\*\* NOTE TO SPECIFIER \*\* Select one of the following motor paragraphs and the associated control paragraph as required and delete the paragraphs 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.
			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.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

* + - * 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 \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			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. Matt White XT1000E - On Axis gain of 1.0. 180 degree viewing cone. Washable surface. GREENGUARD Gold certified.
				2. Argent White XH1500E - On Axis gain of 1.5. High reflectivity fabric with broad viewing cone. Excellent resolution and color balance. Flame and Mildew resistant. Maximum size 8 feet by 10 feet (244 cm x 305 cm).
				3. Pearl White CH1900E - On Axis gain of 1.9. Matt white surface with reflective pearlescent coating. Maximum size 96 inches by 96 inches (244 cm x 244 cm).
				4. Contrast White XH1100E - On Axis gain of 1.1. Diffuse white coating over a grey base material. Recommended for use with low to moderate light output digital projectors, where some provision for light control exists. Maximum size 8 feet by 10 feet (244 cm x 305 cm).
				5. 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.
				6. ClearSound Perf XT950E - On Axis gain of 0.95. 180 degree viewing cone. Acoustically transparent. Textile backed matt white perforated surface. Not recommended for use in sizes less than 80 inches (203 cm) wide or for viewing less than 20 feet (601 cm) from screen.
				7. 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 use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				8. ClearSound Grey Weave XH600E - On Axis gain of 0.6. 180 degree viewing cone. Acoustically transparent woven blend of fiberglass and PVC. Grey material for higher contrast. Acoustical properties are comparable to the highest quality speaker grille cloth. Flame and mildew resistant. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet from screen.
				9. Chroma Key Blue - Blue 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.
				10. 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.

\*\* 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. NTSC Format (4:3). Black masking borders standard.

6 foot (1.83 m) diagonal, 42-1/2 inches x 56-1/2 inches (1080 mm x 1435 mm).

7 foot (2.13 m) diagonal, 50 inches x 66-1/2 inches (1270 mm x 1689 mm).

100 inch (2540 mm) diagonal, 60 inches x 80 inches (1524 mm x 2032 mm).

10 foot (3.05 m) diagonal, 69 inches x 92 inches (1753 mm x 2337 mm).

11 foot (3.35 m) diagonal, 78 inches x 104 inches (1981 mm x 2642 mm).

150 inch (3810 mm) diagonal, 87 inches x 116 inches (2210 mm x 3658 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. 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).

\*\* NOTE TO SPECIFIER \*\* If an extra screen drop is required for the project, fill in the drop height and select the screen border type from one of the following paragraphs and delete the other. Total screen height cannot exceed 24 feet (7.31 m). 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.
		1. Access Fit/Series V: Electric motor operated, steel case. Ceiling-recessed, 18-gauge steel headbox, 5-1/8 inches (130 mm) deep and 4-7/8 inches (124 mm) wide 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. The Access Fit case may be ordered in advance and the screen installed later to eliminate field damage. The screen installs in minutes. Housing is symmetrical allowing for left and right 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 the top of the 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.

\*\* NOTE TO SPECIFIER \*\* Select one of the following motor paragraphs and the associated control paragraph as required and delete the paragraphs 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.
			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.

\*\* NOTE TO SPECIFIER \*\* Select controls and wall and/or remote-control switches required for project. Delete from the following paragraphs the types of controls and switches not used on the project. Coordinate the compatibility of multiple control selections.

* + - 1. Motor Screen Controls, UL certified.

\*\* NOTE TO SPECIFIER \*\* Not compatible with options b, c, d, e, h, i, k, l or m.

* + - * 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 a, c, d, e, h, i, k, l or m.

* + - * 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 \*\* Not compatible with options a, b, g, h, k, l or m.

* + - * 1. 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.

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, g, h, k, l or m.

* + - * 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 a, b, g, h, k, l or m.

* + - * 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 g, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* Not compatible with options d, e, f, h, i, k, l or m.

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

\*\* NOTE TO SPECIFIER \*\* . Not compatible with options a, b, c, d, e, f, g, i, k, l or m.

* + - * 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 a, b, f, g, h, k, l or m.

* + - * 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 \*\* Select one of the following Video Interface Control and delete the remaining. Note that Video Interface Control is not compatible with low voltage control unit. Delete all of the following three paragraphs if video interface control is not required. Not compatible with options a. through j.

* + - * 1. Video Interface Control for use with equipment with a 115V switched outlet.
				2. Video Interface Control for use with equipment with a 12V switched outlet.
				3. Video Interface Control for use with equipment with a 6V switched outlet.

\*\* NOTE TO SPECIFIER \*\* Motor location is optional. Select required paragraph and delete paragraph not required.

* + - * 1. Motor shall be right mounted.
				2. Motor shall be left mounted.
			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. Matt White XT1000V - On Axis gain of 1.0. 180 degree viewing cone. GREENGUARD Gold certified. Available with or without black backing.
				2. Pure White XT1300V - On Axis gain of 1.3. 180 degree viewing cone. For use in situations where lighting is well controlled and where enhanced brightness is needed due to limited projector brightness. Available with or without black backing.
				3. Grey XH600V - On Axis gain of 0.6. Provides excellent contrast and color reproduction. GREENGUARD Gold certified. Maximum size 9 feet by 12 feet (275 cm x 366 cm). Available with or without black backing.
				4. Pearl White MH1500V - On Axis gain of 1.5. Matt white surface with reflective pearlescent coating with black backing. Maximum size 9 feet by 12 feet (275 cm x 366 cm).
				5. ReAct MS1000V - On Axis gain of 1.0. 60 degree viewing cone. Silver/grey surface provides superior performance in ambient light conditions, offers excellent contrast, optimal color rendition, and is fully HD compliant. Maximum size 79 inches by 140 inches 201 cm x 356 cm).
				6. ClearSound NanoPerf XT800V - On Axis gain of 0.8. 180 degree viewing cone. Acoustically transparent white PVC fabric with microscopic perforations. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 10 feet (305 cm) from screen.
				7. ClearSound Perf XT900V - On Axis gain of 1.0. 180 degree viewing cone. Acoustically transparent. Flexible matt white perforated surface. Reasonable control of ambient light is recommended. Not recommended for use in sizes less than 80 inches (203 cm) wide. Not recommended for viewing less than 20 feet (610 cm) from screen.
				8. TecVision XH700X Grey - On Axis gain of 0.7. 180 degree viewing cone. Designed for blending applications on curved or flat screens where ambient light is present. Provides very good contrast and color reproduction. Imaging Science Foundation certified and 4K ready. Dark backing.
				9. 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 4K ready. Dark backing.
				10. TecVision XH900X Grey - On Axis gain of 0.9. 180 degree viewing cone. Provides very good contrast and color reproduction. Imaging Science Foundation certified. 4K ready. Dark backing.
				11. TecVision MS1000X Grey - 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. 4K ready. Dark backing.
				12. TecVision XT1000X White - On Axis gain of 1.0. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready reference screen surface for blending applications, precise resolution, and color accuracy. Dark backing.
				13. TecVision XT1300X White - On Axis gain of 1.3. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				14. TecVision XT1600X White - On Axis gain of 1.6. 180 degree viewing cone. Imaging Science Foundation certified. 4K ready. Dark backing.
				15. TecVision XT1800X White - On Axis gain of 1.8. 180 degree viewing cone. Imaging Science Foundation certified. Suited for active 3D or color combining passive 3D systems. 4K ready. Dark backing.
				16. 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.
				17. CineFlex XT600V - On Axis gain of 0.6. 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.
				18. CineFlex MH800V - On Axis gain of 0.8. 78 degree viewing cone. Low gain flexible rear material. Designed for use with high light output projectors and wide audience seating patterns.
			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. Warranted for 5 years against tab separation

\*\* 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. NTSC Format (4:3). Black masking borders standard.

6 foot (1.83 m) diagonal, 42-1/2 inches x 56-1/2 inches (1080 mm x 1435 mm).

7 foot (2.13 m) diagonal, 50 inches x 66-1/2 inches (1270 mm x 1689 mm).

100 inch (2540 mm) diagonal, 60 inches x 80 inches (1524 mm x 2032 mm).

10 foot (3.05 m) diagonal, 69 inches x 92 inches (1753 mm x 2337 mm).

11 foot (3.35 m) diagonal, 78 inches x 104 inches (1981 mm x 2642 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. 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).

\*\* NOTE TO SPECIFIER \*\* If an extra screen drop is required for the project, fill in the drop height and select the screen border type from one of the following paragraphs and delete the other. Total screen height cannot exceed 24 feet (7.31 m). 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.
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.

\*\* NOTE TO SPECIFIER \*\* Select manual or electrically operated screens from the following two paragraphs as required by the project requirements.

* + 1. Test manually operated units to verify that screen operating components are in optimum functioning condition
		2. Test electrically operated units to verify that screen, controls, limit switches, closure and other operating components are in optimum functioning condition.
	1. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION