



DIVISION 11 00 00 EQUIPMENT

SECTION 11 52 13 PROJECTION SCREENS

1. GENERAL.
 - A. Projection screens should be designated for front projection in all learning rooms unless specified otherwise by the customer.
 - B. Screens shall be located and sized such that students in all seats can easily see the entire projected image without discomfort and within the screen manufacturer's suggested viewing angles.
 - C. Screen height shall be no less than 20% of distance to seat farthest from the screen, and width shall provide a wide aspect ratio (that is, 16:9 or 16:10 aspect) based on this minimum height.
 - D. Either fixed or motorized screens may be appropriate depending on the requirements of the customer and/or room. Regardless of which screen is used, lights and ductwork shall be routed and wiring circuits installed to accommodate motorized screens. Retrofitting this infrastructure after the room is built can be very costly should the customer's needs change over time, so infrastructure should be included in the project scope.
2. PRODUCTS. All screens, either motorized or fixed, shall be from an approved manufacturer.
 - A. APPROVED MANUFACTURERS:
 1. Da-lite (preferred)
 2. Stewart Filmscreen
 3. Draper
 - B. MOTORIZED SCREENS.
 1. Motorized screens shall be the preferred standard unless requested by the customer, in which case a fixed screen may be used in certain situations (see FIXED SCREENS section for details.)
 - a. Da-Lite "Advantage Electrol" shall be the basis of design.
 2. Projection screens shall not obstruct ventilation outlets, since air flow can cause distortion of the image and waving of the fabric.
 3. Motorized projection screens shall only be installed into lay-in ceilings, as installation into hard ceilings makes maintenance, repair and replacement most costly and inefficient.
 4. Projection screens are to be seamless, coordinate size with reflected ceiling plans.
 5. The electric motor shall have pre-set, adjustable limit switches to automatically stop screen in the "up" or "down" positions. To be complete with a one button - 3-position control switch in an approved wiring box and cover plate.



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6. Motorized screens must support low voltage operation and allow control via a 3-button momentary, dry contact switch. Any combination of single or multiple 3-button switches, optional radio frequency remote or infrared remote, or a control panel with momentary dry contacts should control the low-voltage motor.
7. Motors and adjustment must be accessible through an access panel for support and repair.
8. Motorized screens shall not have any trap doors or flaps that open and close as the screen is lowered and raised.
9. Motorized screens shall be tab-tensioned if the width of the screen is greater than or equal to 10' or at the customer's request.

C. FIXED SCREENS.

1. Fixed projection screen are acceptable only in areas where sufficient whiteboard space is available without interfering with the projection surface. Examples include large rooms with very high ceilings where walls would be otherwise unused or rooms with wall-mounted short-throw projectors.
 - a. Da-Lite Cinema Contour shall be the basis of design.
2. Screens shall have a black velvet border and a tensioned surface free of wrinkles.
3. Fixed screens shall not be placed adjacent to whiteboard surfaces. They may only occupy the same wall as a whiteboard if there is a significant separation between the two to minimize the potential for confusion and misuse/damage.