

SECTION 10 82 13
ROOFTOP EQUIPMENT SCREENS
BASIS OF DESIGN SPECIFICATION

Custom Mechanical Equipment (CME)

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This Basis of Design specification is intended for direct insertion into project manuals and bid documents.

2.1 BASIS OF DESIGN

A. Design is based upon rooftop equipment screening systems manufactured by Custom Mechanical Equipment (CME).

B. Provide custom-fabricated rooftop equipment screening systems specifically engineered for project equipment layouts, service-access requirements, airflow requirements, wind-loading criteria, and architectural screening objectives.

C. Comparable products seeking approval shall demonstrate compliance with all specified requirements, including custom-engineered project-specific layouts, unit-mounted screen construction, equipment serviceability and maintenance access provisions, airflow accommodation requirements, structural performance requirements, wind-load performance requirements, warranty provisions, configuration capabilities specified herein, and metal panel construction with aluminum framing.

2.2 SYSTEM DESCRIPTION

A. Provide rooftop equipment screening systems consisting of metal screen panels, aluminum framing, mounting hardware, trim, and accessories required for a complete installation.

B. Systems shall be custom-engineered for each project and shall not be limited to predetermined standard layouts.

C. Systems shall be capable of one-sided, two-sided, three-sided, four-sided, or

combination screening configurations as required by project conditions.

D. Systems shall be designed to accommodate equipment manufacturer-required operating clearances, airflow requirements, rooftop obstructions, and maintenance access requirements. With options for louvered panels positioned for additional airflow at critical locations.

2.3 DESIGN REQUIREMENTS

A. Maintain equipment manufacturer-published operating clearance and airflow requirements unless alternate clearances are specifically requested. Limited to 60 inches of clearance. A maximum of 16 ft between units is allowable for combination screens.

B. Do not obstruct access doors, removable panels, filters, coils, electrical disconnects, controls, drains, hoods, or service areas.

C. Framework supports shall be spaced at a maximum of 108 inches on center unless project-specific engineering requires closer spacing.

D. The end of a screen wall shall not extend more than 36 inches beyond the final support location unless otherwise approved by the manufacturer.

E. Standard screening systems shall be designed for overall screen heights up to 120 inches.

F. Standard screening systems shall be designed to withstand wind speeds up to 120 mph.

G. Screens shall be unit-mounted.

H. Manufacturer shall provide project-specific shop drawings for each screening system.

I. Professional Engineer stamped drawings and calculations shall be available when required by the Contract Documents.

2.4 MATERIALS

A. Screen Panels:

1. Factory-fabricated steel and aluminum screening panels.
2. Thermoformed plastic screening panels shall not be acceptable.

B. Framing:

1. Manufacturer's standard aluminum framing system designed for project-specific loading and support requirements.

C. Fasteners:

1. Corrosion-resistant fasteners and attachment hardware as required for installation.

2.5 PANEL PROFILES

Available panel profiles shall include:

- R-Panel
- U-Panel
- Mega Rib
- Multi-Cor
- Mini-Rib
- Louvered
- Approved custom profiles

2.6 FINISHES

A. Color shall be selected from the manufacturer's standard color chart.

B. Custom colors shall be available subject to Manufacturer approval.

2.7 ACCESSORIES

A. Hinged access doors.

B. Removable access panels.

C. Top trim and corner trim.

D. Cross braces.

E. Saddle mounts.

F. Kicker offsets.

G. Jackstands.

H. Mounting brackets and hardware.

I. Optional lockable access hardware.

2.8 WARRANTY

Company warrants the goods against defects in materials and workmanship, either (A) for a period of 18 months from the date of delivery of the goods or (B) for a period of 12 months from the date of the installation of the goods, whichever first expires.

Panel/flashing manufacturer coating warranty:

The Metal Store – For Weather XL siliconized polyester Kynar 500 or Hylar 5000. 40 years of cracking, flaking, peeling, and adhesion. 30 years for chalking and color change. For Galvalume – 25 years structural warranty against rupture or perforation due to normal environmental conditions.

McElroy Metal - For Kynar 500 or Hylar 5000, 40-year warranty against cracks, checks, peels, and chalk or color change.