Technical Bulletin



ELAMINATOR® Insulation System 300 Series Safety Considerations

OSHA Compliance

The ELAMINATOR® Insulation System 300 Series machines are designed to provide the contractor with a self-contained system for the installation of insulation and facing materials into a engineered metal building roofing system. There are several components of the 300 Series machines that combine to provide fall protection that meets current OSHA safety standards for these types of construction applications.

These current OSHA standards for steel erection, 29 CFR 1926.750-761, require that employees involved in the roofing system installation process be provided with fall protection beginning at 15 feet above the ground or working grade level. These regulations also allow for the use of a Controlled Decking Zone (CDZ) for workers involved with leading edge installation. However, since the design of the 300 Series provides a cantilever or support plate that trails underneath the facing and insulation and ahead of the leading edge installers the fall protection for those workers is addressed via closure of the opening using these plates, thus making a CDZ unnecessary while using the 300 Series machines.

When using the 300 Series machines the workers who are involved in both non-leading edge, and leading edge work activities are protected from falls by the surface of secured panels which they walk upon, the cantilever or support plates, the guardrail system, and the Perimeter guardrails that are part of the 300 Series machine components. While the machine design constitutes an installation methodology it is viewed by OSHA primarily as a type of scaffold system that incorporates various components to provide fall protection for workers involved with engineered roofing systems installation activities.

All of the above mentioned components meet the current requirements for scaffold components outlined in 29 CFR 1926.450-454. When used as designed, the 300 Series machines allow the contractor to efficiently and safely install the roofing system while complying with the fall protection requirements of current OSHA standards.

Some other important safety considerations when using the 300 Series machines are;

• Workers who are assembling and installing, moving, or disassembling and removing the machines must be provided with alternative forms of fall protection at these times. This usually means some form of personal fall arrest system such as a full body harness with lanyard and shock absorbing device that is attached to an appropriate anchorage point. A qualified person should determine the particular form of fall protection that is best suited for site conditions.



- Workers who perform work outside the guardrails and Perimeter guardrails must be provided with alternative forms of fall protection during the time they are working outside these barriers.
- No more than one person should be standing or walking on any one cantilever plate at

one time, or no more than two persons on any one support plate. The Maximum Rated Capacity is 25 pounds per square foot for all components of the ELAMINATOR system.

- An Authorized Operator, certified or has a certificate of completion, in the Certified Elaminator Operator Program (CEOP) must operate the assembled machines according to established guidelines as found in the 300 Series machine manual. On each project, the employer who has direct control over the work activities of the machine operator is the only party that can designate the worker as either qualified or competent with regard to any specific type of work activity.
- Machines (or sections of machines) should not be moved or lifted while occupied during the assembly, installation, moving, and disassembly and removal processes.
- Use of the Owens Corning patented Power Pullers to advance the machine assembly on the roof allows the workers to stay within the guardrail system for the operation of the machines.

Since the 300 Series machines are made up of various types of fall protection systems that are allowed for use under current standards, Owens Corning recommends a Site Specific Erection Plan (see the OSHA regulations, Appendix A to Subpart R – safety standards for steel erection for the required content of the plan) detailing the ELAMINATOR specifications, the safe work practices that will be employed in operation of the system, and proof of operator qualifications and training. This plan should be in writing, signed by the qualified person who evaluated the site, made the selection, and prepared the plan. It is recommended that the following statement be used in the Site Specific Erection plan to explain and justify use of the ELAMINATOR Insulation System 300 Series machines:

The use of the ELAMINATOR® Insulation System 300 Series machines has been selected as an alternative form of fall protection for the roofing system installation process. This decision was based on the engineering data contained in the attachments to this plan, the training provided to the certified operator of the system, the standard operating procedures developed for use of the machines as contained in the ELAMINATOR 300 Series Machine Manual, and the specific requirements of 29 CFR 1926.760 (a)(1), and 29 CFR 1926.760(c)(1-7). See attachments for further information (Attachments for ELAMINATOR: ELAMINATOR submittal sheet, ELAMINATOR Sales Brochure on 300 Series and ELAMINATOR 300 Series Machine Manual)

General Contractor and Building Owner:

• Because of the potential implications of shared responsibilities between the building owner, general contractor, and erector, use of the ELAMINATOR® Insulation System 300 Series will ensure compliance with current OSHA safety standards for steel erection as found in 29 CFR 1926.750-761, and provide the safest possible method for installation of the engineered metal building roofing system.

Erector:

- Use of the 300 Series machines will provide the erector with the most efficient means of compliance with current OSHA safety standards for leading edge work, and other work activities associated with installation of the engineered metal building roofing system.
- Owens Corning's CEOP training program for system operators ensures that properly trained and qualified personnel are facilitating the installation process in cooperation with the sheeting crew.
- Development of a Site Specific Erection Plan will aid the erector in fulfilling compliance obligations by documenting the systems design and operational criteria as well as the reasoning for selection of the system for the project. This plan allows the OSHA inspector and other concerned parties to thoroughly evaluate the applicability and appropriateness of the system in providing the requisite fall protection for roofing systems installation personnel.



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General Liability, Risk of Loss due to Injury, and Insurance Costs:

General Contractor and Building Owner:

- Use of the 300 Series machines provides for the potential significant reduction in the overall general liability risk exposure because its design prevents the materials, tools, and equipment being used from falling to lower levels by the cantilever or support plates and the scaffold machine.
- The 300 Series machines provide superior fall protection for leading edge installation and associated work activities thereby addressing the most serious hazards involved in the roofing systems installation process. Use of this system may reduce the potential for the serious injuries typically associated with these hazards.



• Utilization of erectors who use the ELAMINATOR® Insulation System 300 Series may help to control insurance and overall job costs due to reduced risk factors and lower mod rates reflected in the erectors insurance costs as a result of fewer injuries.

Erector:

• Because of the superior fall protection provided by the 300 Series machines during the highest risk work activities the erector may be able to reduce injury rates and thus contribute to better controlling, and possibly lowering, their workers compensation insurance costs. This factor may also help to make an erector more competitive and profitable in their operations.

Insurance Underwriter / Agency:

- The ELAMINATOR® Insulation System 300 Series meets all current OSHA safety standards for fall protection as outlined in 29 CFR 1926.750-761. Insured clients who use this system will provide their employees with a safe working environment that contributes to reducing the risk of injury to the lowest levels possible.
- Owens Corning's Certified Elaminator Operator Program (CEOP) ensures that operators are fully trained and qualified to safely operate the machines as well as being informed of current safety standards and safe work practices associated with operation of the system.
- Engineered metal building roofing systems installation contractors who use the ELAMINATOR® Insulation System 300 Series may experience fewer injuries which will result in lower loss ratios thus helping the agent and underwriter to justify Experience Modification Rate (EMR or MOD Rate) reductions to the lowest levels allowed by law. The agent and underwriter are encouraged to thoroughly evaluate the ELAMINATOR® Insulation System 300 Series in order to establish specific performance objectives that the installation contractor will need to meet in order to achieve the lower rating.