Rescue Systems
Incorporating Them Into Fall Protection Programs

PS: Describe your position with DEUS Rescue.
Jeff: I am the technical manager for DEUS Rescue. I consult with industrial users to help them develop safe programs for rescue at heights. This includes self-rescue from aerial lifts, bailout off of rigs, assisted rescue from towers as well as multi-person evacuation from platforms.

PS: How does rescue fit into a fall protection program?
Jeff: Fall protection equipment is only half the battle when it comes to keeping workers safe at heights. Rescuing workers in a timely manner to avoid suspension trauma or additional injuries while suspended is the other half. The fall protection field is currently much more mature than rescue, but strides are being made rapidly with regard to rescue. OSHA’s General Duty Clause and the requirement for “prompt rescue” make it clear to employers that this procedure must be recognized and practiced.

Rescue is not just an element of a fall protection plan; it is a critical procedure by itself and needs to be prioritized on an equal level within a fall protection program. If an employer recognizes when fall protection equipment is needed, then the same must be true for rescue. Industry experts recognized this and incorporated new requirements into the latest ANSI/ASSE Z359.2 and Z359.4 standards.

PS: How do ANSI/ASSE Z359.2 and Z359.4 address rescue?
Jeff: Standards must be the basis for an employer’s fall protection and rescue program. The developers of consensus standards such as Z359 are industry experts representing government regulation agencies, users groups, unions, manufacturers and testing laboratories. Their knowledge and experience, combined with an overall desire to create safe procedures and equipment testing standards, are what yield safe products for workers.

ANSI/ASSE Z359.2-2007 requires that the employer provides a means for rescue from heights, and defines requirements and training for authorized and competent rescuers. The standard also offers guidance for employers regarding procedures they wish to rely on professional rescue services, such as fire departments, by calling 9-1-1. If the employer chooses this type of rescue program, it must follow certain procedures in advance. A written agreement between the employer and professional rescue service must be in place prior to any elevated work performed. A job hazard analysis of the site, along with availability, preparation, training and required equipment specific to rescue at that location, must be completed. ANSI/ASSE Z359.2 also contains guidance and training requirements for employers who decide to provide for their own rescue from heights.

ANSI/ASSE Z359.4 created technical requirements and testing procedures for rescue descend- ers, ropes, harnesses and other equipment. I recommend that employers check whether their current rescue equipment has the ANSI/ASSE Z359.4 certification marked on it to ensure that products meet current standards. You would not use fall protection equipment that has not been certified to the current standards, and you also should not use rescue equipment that is not marked accordingly.

PS: Why has there been a delay in adopting rescue programs in the workplace?
Jeff: Many people think rescue is challenging and difficult to implement into their fall protection programs. With advancements in descender technology and well-established procedures, rescue practices can be implemented easily and seamlessly into all fall protection programs. Since rescue situations tend to be infrequent, they sometimes do not receive the proper attention. However, since potential hazards and injuries resulting from a fall or suspension are serious, employers need to give rescue implementation a higher priority.

PS: Should employees practice rescue?
Jeff: The ANSI/ASSE Z359.2 standard requires that employees know how to inspect, anchor,
assemble and use their rescue equipment. During rescue system training, employees must become competent to safely and comfortably conduct rescues from heights for all locations they will access or at which they will work. One does not become smarter during an emergency. Therefore, one must be well prepared in advance and have equipment ready for deployment prior to leaving the ground. Rescuers must be ready at all times since there is never any warning that a worker may fall and need help.

Training must be delivered annually—at a minimum—and should be practiced often. The standards require physical hands-on demonstrations of rescue scenarios to ensure that authorized and competent rescuers have the proper skills.

**PS:** Describe a situation in which a worker may need to be rescued.

**Jeff:** Many situations might arise where rescue would be required while working at heights. Slipping on a platform or ladder, aerial lift malfunction, heat exhaustion, cramping, nausea, diabetic reactions, electrical shock or even bee stings that cause anaphylactic shock are just a few examples of work situations that can lead to a rescue scenario. Falls continue to be one of the most common incidents in the workplace, so rescuing an injured worker is imperative.

**PS:** What details are needed for a rescue program?

**Jeff:** One must ensure that the proper rescue equipment is selected for a particular work environment. Rescue anchors are required to withstand 3,000 lb or to be certified to five times the applied load. Anchor attachments must be chosen with versatility in mind and can be applied anywhere on a structure quickly without being compromised by elements such as sharp lattice steel or hot equipment.

If harnesses are not used in the work environment, consider how to safely attach a victim to the rescue system. Hardware connector components should have 3,600-lb gate strength ratings and should be compatible with the rescue equipment. A means of hoisting workers off fall protection gear or moving them horizontally on a platform also must be considered. Rarely will an incident occur where you have a good vertical descent.

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path, so be prepared with the proper tools to move workers to a better location to get them down.

The employer must select a descent device appropriate for the work environment. Consider which features are necessary for the site, such as hands-free, automatically or manually controlled, usable with different body weights and ease of use for self-rescue. There are new descent device technologies that can simplify safer rescues.

The size of the work crews and environment also will help determine the type of rescue equipment needed. If employees work in two-person crews, consider rescue procedures and equipment that one person can deploy to complete the rescue operation. Choose equipment that rescuers can train in and ensure that training retention is maximized.

**PS:** What rescue training tips would you recommend?

**Jeff:** When performing rescue training, make sure a separate rescue system is on standby in case an incident occurs during training. Until a person is competent with the equipment and procedures, employees are exposed to additional hazards.

Start slow with simple rescue scenarios, then build on those until workers have practiced the most challenging conditions. Train to real conditions of the work environment. Do not simplify rescue training to save time or to check it off a list.

Ensure that a safely designed backup system is in place during training. Consider what would happen if the trainee made a mistake. Will the backup system leave the trainee hanging in the air? If so, the clock is ticking, and you will now need to perform a real rescue on-site if any suspension trauma occurs. You can simplify this condition by choosing an automatically controlled backup system that can descend the trainee to the ground. Choose a backup system so that it does not interfere, slow the trainee during the rescue exercises or require the trainee to manually activate it. Also, make sure that good communication exists during training from the rescue location all the way down to the ground.

**PS:** Any last words of advice on rescue?

**Jeff:** Many people feel intimidated by rescue procedures and shy away from them. However, similar to any other safety policy, it can be addressed reliably and efficiently if you address it head on. Rescue from heights is quickly gaining acceptance as employers realize that it is not only possible, but necessary, to perform these types of rescues.

Consider all work locations at heights. It may sound challenging at first, but rescue really can be completed promptly and safely with the right equipment and training.