

PERSONAL alarm systems that allow lone workers to call for help if they are attacked while out and about are widely issued by employers with field staff now. But what if the risks facing your lone employees are more local — working at height on your premises, or with hazardous vapours in confined spaces, where they might need help but lose consciousness before they can hit a panic button?

This is where automatic alarms, also known as “man-down” alarms, come in. The systems are already popular in high-hazard industries such as petrochemicals, where lone workers could be at risk while cleaning tanks, but they are finding new uses.

Though automatic alarm units are still likely to have a panic button or cord that the operator can use if they are in trouble and still conscious, they will have something extra. The most common automatic trigger is a tilt switch. If the unit attached to the worker’s body moves beyond 45 degrees from the vertical, it will start an audible countdown, commonly of 15 seconds, to allow the wearer to reset the unit if it’s been triggered inadvertently. After that, it will send out an alarm message to a control point.

In situations such as confined spaces, or combined with fall-arrest equipment where a worker could be trapped upright, a tilt alarm is of little use. In these cases, units can carry motion sensors, where the countdown starts a preset time after the sensor stops detecting movement.

Though the focus in providing automatically activated alarms is usually on the nature of the work, they can also help employers discharge their duty of care where the risk is associated with, or increased by, an employee’s medical condition. Workers with epilepsy could be issued with tilt-activated units when working alone and diabetics who have any history of severe hypoglycaemic attacks could also benefit. Some employers offer motion sensor alarms to diabetes sufferers in white-collar jobs who might be working alone at computers for long spells. If the sensor is set to a high enough level of sensitivity in this sort of situation, just the motion of typing will prevent the alarm going off.

Back at base

You can issue workers with the highest specification alarm on the market, but you still haven’t begun to discharge your duty of care if they are not ensured of a fast response when it goes off.

The alarm signal is often routed to a terminal at a reception desk, facilities office or security station, or any other permanently staffed location where software will show on a site map the identity and location of any worker who triggers a call. But many systems can be set to sound radio pagers or send email, SMS messages or recorded phone messages to nominated individuals, perhaps keyholders, and/or the emergency services.



Out for the count

Peter Swan considers the uses of automatic alarms for site-based lone workers

These latter options are especially useful to protect night security staff or lone workers out of hours.

Systems are often based on satellite tracking technology. These are fine outside buildings but will not pinpoint a worker’s

present particular problems, but any obstacle can be overcome by higher-powered transmitters and extra relay stations to pass the signal beyond any blocking material. The RF on any alarm needs to be specified so that it doesn’t interfere with other radio devices on site, such as wireless IT local area networks.

After choosing an automatic lone-worker alarm system, you need check that whoever installs it is competent to make sure it won’t come up against any of these problems and that the units transmit properly from any part of the site lone workers might reach. It’s also worth asking any supplier you shortlist about their after-sales service and technical support and getting references from other companies using their system. ■

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If the unit moves beyond 45 degrees, it will start an audible countdown

level in a multi-storey building, so should be combined with other identification technology for indoor use.

Radio frequency (RF) based systems can send an alarm signal up to 1km in open space, but most materials, including window glass, will shorten their effective distance. Metal floor pans and ceiling grids in buildings