

# UK firms win national awards for innovative designs to reduce musculoskeletal risk for workers

- A civil engineering firm and an air ambulance charity have won national awards for designs that eliminate the risk of musculoskeletal injuries at work.
- Robots and bespoke roller systems eliminate manual lifting risks.
- Winners mark the 10th year of the MSD Risk Reduction Through Design Awards
- Designs developed with workers could inspire other employers to follow suit.

Workers at two UK organisations will benefit from healthier working conditions after innovative design changes to cut musculoskeletal disorders (MSDs) earned their employers this year's MSD Risk Reduction Through Design Awards – now in their tenth year.

The awards, sponsored by the Health and Safety Executive (HSE) and the Chartered Institute of Ergonomics and Human Factors (CIEHF), recognise employers who have redesigned tasks to remove the risk of MSDs – injuries to the back, joints and limbs that are among the most common causes of work-related ill health in Britain.

MP Coleman Ltd, a civil engineering and materials company, won the main award. Workers were manually palletising 25kg bags – each handling around 5 tonnes of material per shift – involving repetitive bending and twisting that caused lower back fatigue and shoulder discomfort. A robotic arm now picks, places and stacks the bags automatically, with an automatic wrapping unit replacing manual stretch wrapping entirely. Perimeter guarding (not shown in the photos)) and automated controls improve safety and simplify the workflow.

No jobs were lost; workers were upskilled into other activities.



**BEFORE**

**AFTER**



Before: Workers manually palletised 25kg bags from conveyor. This involved constant bending and twisting motions. After: A robotic arm loads bags from conveyor to pallet, which is then wrapped automatically

Thames Valley Air Ambulance, the charity serving more than 2 million people across Berkshire, Buckinghamshire and Oxfordshire, wins the Small to Medium Enterprise Recognition Award. Training manikins weighing between 20kg and 40kg had to be handled multiple times a day by two workers, with restricted space making ideal lifting postures difficult, increasing injury risk. Bespoke roller shelving and a height-adjustable roller trolley, designed with equipment manufacturers, health and safety specialists and workers, has substantially reduced MSD risk and made it a one-person task.



**BEFORE**

**AFTER**



Before: Manikins stored on fixed shelving in a restrictive area, compromising workers' posture when handling. After: Custom roller shelving installed with a height-adjustable roller trolley, eliminating the need to carry the 20kg-40kg manikins to the training area

**Chris Quarrie, HSE's Chartered Ergonomist, Human Factors Specialist and chair of this year's judging panel, said:**

"We congratulate both MP Coleman and Thames Valley Air Ambulance for reducing workplace MSD risks for their workers, hopefully their ideas can inspire others. This is the tenth year of the MSD risk reduction through design awards, and they demonstrate how design changes can eliminate or significantly reduce MSD risk – creating healthier workplaces."

**Further information:**

1. For more information on the award winners visit: <https://www.hse.gov.uk/news/msd-awards.htm>
1. More information about Chartered Institute of Ergonomics and Human Factors (CIEHF): <https://ergonomics.org.uk/>
1. The Health and Safety Executive (HSE) is Britain's national regulator for workplace health and safety. We prevent work-related death, injury and ill health through regulatory actions that range from influencing behaviours across whole industry sectors through to targeted interventions on individual businesses. These activities are supported by globally recognised scientific expertise.
1. HSE news releases are available at <http://press.hse.gov.uk>.