

Ruth Lee

Feeling the heat during training – manikins with thermal-imaging capabilities

You may already know award-winning manufacturers Ruth Lee Ltd for their range of rescue-training manikins, but did you know they have recently brought a new product to market, which allows you to give one of their manikins instant thermal-imaging capabilities?

A growing need for faster searches

Often in rescue operations, time is critical. The faster a casualty is located, the more likely it is to see a positive outcome, and technology is increasingly playing an important role in improving the speed and efficiency of search and rescue.

In recent years, thermal-imaging technology has come on in leaps and bounds with some fantastic equipment available on the market, but the technology is only as good as the person using it and therefore regular training is an essential part of the process when introducing new tech into operations.

By default, poor-visibility environments are dangerous places. It is often unsafe and impractical to expect a volunteer to 'hang around' waiting for rescue teams to practise the 'search' element of their training. No one wants to wait in a smoke-filled building or wait patiently under rubble for Urban Search and Rescue training.

As manufacturers of rescue-training manikins for the past quarter of a century, Ruth Lee Ltd have been asked many times

▼ **Man Overboard manikin modelling the thermal-imaging hood.**



▲ **The thermal-imaging hood has been tested at sea up to an altitude of 2,000ft.**

about creating a thermal-imaging manikin which would safely replace the requirement for volunteer casualties in complex or dangerous search and rescue training.

After researching thermal imaging within the rescue sector, Ruth Lee Ltd realised that they could bring this capability to their manikins, without the need for a new manikin model. Instead they have created a thermal-imaging suit, allowing for faster and more accurate body searches in poor visibility environments within the fire service, including the wide range of search and rescue operations undertaken.

Creating a realistic and safe casualty

Realism in training is at the heart of what they do at Ruth Lee Ltd. Their products are created with the aim of providing a realistic training scenario and the range has developed over the years to encompass many aspects of operational firefighter training – from BA snatch rescues and fitness assessment, to technical rescues such as confined space, flood rescue and working at height. So, the development of a thermal suit had this same end goal – to provide an accurate representation of a human form visible to thermal-imaging equipment.

The Ruth Lee Thermal Suit was extensively tested by several UK-based Fire and Rescue Services, including Severn Park Training Centre. During testing, the FLIR thermal-imaging cameras were used.



▲ **Achieve faster and more accurate body searches in poor visibility environments.**

'Students have been impressed with how realistic the casualty looks. We were even accused of having an instructor acting as a casualty,' said Ian Hughes, Watch Manager and trainer at Severn Park Fire & Rescue Training Centre

The Thermal Suit can be used with any adult Ruth Lee Manikin (up to 90kg) and can be preheated prior to use, maintaining an effective heat signature for approximately 1–2 hours (depending on ambient temperature – the battery life will deplete faster in colder temperatures), or alternatively, the battery is attached in a holster on the side of the leg.

Having the battery attached prolongs the usage time to approximately 3–4 hours (depending on ambient temperature), making it especially useful for search and rescue (SAR) or Urban SAR operations.

On land and at sea

The capability for thermal-imaging training doesn't just stay on dry land! Therefore, as part of the development process a thermal-imaging hood was also created, which can be worn by any adult Ruth Lee Water Rescue manikin, and which allows water rescue teams to search large expanses of open water with a visible heat signature tested up to 2000ft!

▼ **For more information, go to www.ruthlee.co.uk**