

Rated Load indicators does BS still apply?

For some time now we have been aware of some confusion regarding the standards for rated load indicators on tower cranes. In the UK the HSE are quite firm that tower cranes must be fitted with a Rated Overload Indicator that meets BS12077-2.

This states that the crane must be fitted with an overload indicator that provides the operator with a warning, visible/audible at every control station, when the crane approaches its maximum capacity to give him sufficient time to react prior to the controls locking out at 100 percent. An actual load and actual radius readout is also required with an indication of the maximum load possible at that radius and the maximum radius possible with the load on the hook.

The cost of fitting this level of indicator particularly to the remote controller can cost as much as £3,000 to £6,000 more than the simplest systems available. No problem on larger cranes but a hefty additional cost on the smallest self erectors. Still if it applies to all cranes then the market finds a way to absorb it. Problem is that at the moment it doesn't. It seems that small tower cranes approved in some parts of Europe are inspected and approved by notified bodies and given a CE mark with a very basic overload indicator, sometimes with just simple overload warning lights usually mounted to the cranes mast/tower.

The confusion arises in that a properly CE marked machine is supposed to be free to be used in any European country and yet here in the UK the HSE insist that tower cranes must meet the British standard, seemingly a restriction of trade. So what is the answer? Why is there this discrepancy and what sort of overload device should you insist on?

Seeking clarification on this issue proved to be very challenging, and our investigations only seemed to throw up more confusion. Finally though we do seem to have got to the bottom of it.

The harmonised European Standard for rated load indicators for cranes, BS/EN 12077-2, is quite clear and seems remarkably similar to the old British standard. An indicator must provide a readout of the actual load radius and the actual load on the hook along with the maximum capacity possible at that radius. When 95 percent* of the maximum lift capacity is reached an audio and visual indication must be provided which is visible and audible from every control station and then at 100 percent of the rated lift capacity



Check the overload warning device on your small tower crane, it might not be strictly legal!

a different light and warning signal must sound continuously and the controls must lock out.

However the indicator standard is subject to the detailed standard for each crane type, and this is where the confusion arises. Unlike mobile cranes, the European standard for tower cranes is just reaching the final draft stage, and is not harmonised. The final draft is likely to include a full reference to the indicator standard, so once it is harmonised then all tower cranes sold in Europe will need to have radius and load readouts.

Until then each country references different national standards in order to confirm compliance with the machinery directive and thus qualify for a CE mark. Cranes that are CE marked are supposed to be allowed to work unhindered throughout the EU. Individual

countries can however in some cases insist that certain local safety rules are met and this is the direction that the HSE are coming from.

However there are no gates or inspections at the border so every year tower cranes are sold in the UK that do not comply with what the HSE considers to be the minimum standards.

So what should you do if buying or renting a small tower crane? We recommend that you check that it has a BS/EN 12077-2 Rated Load Indicator. In the event of an accident, a crane fitted with anything less could cost you dearly.

*In order to allow for a margin of error the approaching overload warnings are often set to activate at between 90 and 92.5 percent with the overload cut out coming in at 97.5 percent.