



Weightron in Action

with



and



Crane scale assembly plays important safety role for Virgin Atlantic Airways

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Supplied via mechanical handling experts, Sheffield based Street CraneXpress (SCX), the Weightron system consists of a Model LD rechargeable 20 tonne capacity crane scale, a bi-directional UHF radio link, D800 weight terminal and audible alarm. The D800 terminal features two set-points, which trigger the 100 dB alarm if pre-set loads are exceeded. The first set-point can be manually set by engineers at a value incrementally above the known weight of the component being lifted. The second acts as a maximum crane system overload warning and is permanently set at 16 tonnes. This latter value is still well within the crane scale's ultimate proof tested overload capability.



The crane scale system has been installed to monitor loads in the overhead crane system during the critical lifting of major aircraft components, including engines, engine nose cowls and wing flap assemblies.



When fitting or removing such critical assemblies, it is essential that the pre-loaded weight on the crane is monitored at all stages of the task to negate any chances of overloading the aircraft structure. All aircraft will have tendencies to shift their balanced weight as large assemblies are removed and fitted. For example, the average weight of an engine is seven tonnes and if this large weight

is removed from an outboard wing position the aircraft wing will lift upon the removal. However, when the engine is reinstalled, as the weight is added back on to the wing, the oleo of the main landing gear will compress. Unfortunately the main landing gear oleo can have a tendency to stick and

at any point can sink to its set position. If the crane is still attached to the engine and the engine is



also attached to the wing, this settling of the oleo will overload the crane without any indication to the operator or engineers. With the remote radio link crane scale assembly, the audible alarm set-point can be preset to the required safe working limits, allowing the operator and engineers to know exactly when this type of incident occurs. Upon hearing the alarm the

operator / engineer can immediately reduce the loaded weight of the crane, thus minimising any possibility of damage.

The robust LD crane scale, manufactured by Weightron's German sister company EHP, can transmit weight data up to a distance of 500 metres (direct line of sight) via the industry approved ultra high frequency secure radio link. The LD scale features an easy-to-read, seven segment backlit LED display and provides a minimum of 80 hours use between recharges.

Virgin Atlantic Airways' Tooling & GSE Manager Andy T Currey concluded: *"It is vitally important to ensure critical lifting operations are carried out safely and effectively. The Weightron system gives rapid warning to the crane operator if lifting forces exceed preset safety levels. The wireless radio link allows excellent operational flexibility within the expansive hangar and the system can be transferred to other locations if required."*

Street 
 **CraneXpress**

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