“LIFTING MOMENT LIMITING DEVICE FOR MANUAL EXTENSIONS” SYSTEM

According to the current state of the art, an automatic lifting moment limiting device to be fitted to manual extensions (of the type used in cranes) cannot be applied except at exorbitant cost, and even then is of doubtful reliability. The EN12999 standards also authorise the use of a manually activated system, and Fassi has therefore designed, developed and patented a system which, combined with the “FX” electronic system, uses a dedicated software to decide whether the load applied to the manual extension can be lifted or not, according to the foreseen loads. The system also supplies a sufficiently reliable indication of the value in Kg of the applied load. Should the operator be required to lift a load whose weight is not known with the manual extensions, he can ask the system if the load is within the capacity of the manual extension and then decide, according to the known weight, whether or not to continue with the lifting procedure.

The procedure to be followed is highlighted on the user control panel display or on the display on the radio remote control panel, and is carried out using buttons or dedicated icons.

As an example, the following outlines the various messages that appear on the RCH Evolution radio remote control display during execution of the procedure (for the guided steps in the procedure please refer to the “Evolution” technical manual):

[Images of display screens showing different messages]
In the current state of the market, apart from Fassi, only one other crane manufacturer is able to provide a load limiting device for manual extensions. All the other manufacturers have none, and therefore, on the basis of the regulations, should not be selling manual extensions that do not comply with European directives. The problem is solved by selling manual extensions separately from the actual crane, and leaving the end customer with the problem of how to make them comply with the directive, suggesting, for example, that they purchase load weighing systems such as digital dynamometers to be fitted to the hook. However, these systems have a considerable economic impact when compared to the value of the manual extensions themselves.

Advantages for the user:

- **The ability**, using a simple guided procedure, operating directly on the radio remote control panel or on the user control panel, **to obtain information on whether or not it is possible to carry out lifting** within the load capacities foreseen for the manual extension.

- **The ability to know**, with a good level of precision, **the weight of the load** to be lifted.

- Use of the system guarantees totally safety in use of the manual extensions with reference to the information it is capable of providing, but does not preclude the ability to work.