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“XP” DEVICE

The **XP (Extra Power)** device, developed by the Fassi Gru SpA Design, Research and Development departments, allows an extra power on crane for utilisation in the most difficult and problematic working situations due to the load size and/or to particularly demanding dynamic conditions.

Where does this extra power come from?

When designing a crane, to define the lifting moment and the crane performances in terms of manoeuvrable loads, the dynamic factor related to the utilised oil flow (pump capacity) and therefore to the speed of the crane dynamic movements has also to be considered in the calculation formula of the loads. The result of the formula application is that, if the movements are faster, that is the dynamic coefficient is higher, so the manoeuvrable loads are lower. Consequently, on a crane working with a prefixed oil flow for which the liftable loads are calculated according to the formula, by reducing the oil flow and therefore the speed, the lifting capacity may be increased.

The lifting and descent of the inner and outer booms and any eventual hydraulic jib and rotation are considered dynamic and therefore subject to speed restrictions in **XP** mode; the extension functions of the crane booms/hydraulic jib and winch are not subject to restrictions as, from a calculation point of view, they are considered “static functions” and therefore they maintain their standard nominal performances.

This is the basic concept on which the **XP** device is founded.

By reducing the dynamic effects on load by 20%, a **10% increase in crane performances** is achieved.

The system can be activated by means of a button or an icon on the control handle of the radio control.

XP button on the control handle for cranes with turntable



XP icon on the control handle of RCH radio controls



The device is fitted on crane models named "XP" and equipped with radio remote controls.

The handling of speed reductions and of the increase of the activation pressure value of the lifting moment with "XP" system is realised by means of parameters prefixed in the software which determine a reduction of the feeding tension to the electro-hydraulic modules of the distributor with consequent limitation of the stroke in the spools, reduction of the oil quantity available at the crane functions, simultaneous increase of the working pressure to the distributor and activation of the limiting moment.

The handling of the second setting level of the general by-pass valve is made by means of the addition of a second main-relief valve external to the distributor.

Advantages for the operator:

- Possibility to complete difficult operations and situations in full safety and with the maximum manoeuvre precision granted by the speed reduction of crane utilisation.
- Easiness of activation of the device directly from the control handle of the radio control by means of a suitable button or icon.
- As the device is an integral part of the original crane design, its utilisation is part of the design parameters of crane operating performance and safety.
- Smooth and controlled manoeuvres.