

# MODELS REGARDING THE OPTIMIZATION OF STOCK MANAGEMENT IN CLINICAL ENGINEERING DEPARTMENTS

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In order to answer the questions “*What product needs to be resupplied?*”; “*When does the resupply need to be effectuated?*” and “*How much is it necessary?*”, the present paper treats in the first part, both theoretically and practically the patterns of stocks management, differentiated as it follows:

## **A. INVENTORY MANAGEMENT MODELS IN A CERTAIN FUTURE.**

**(a1) The Wilson Model** takes into consideration the determination of the economic quantity that minimizes the stock management cost before allowing the replenishing procedures to become automated.

**(a2) Wilson’s Model and the digressive price of the supplier** takes into consideration the potential economies that represent raw material acquisitions at a preferential price, the objective of this model being, thus, modified in relationship to the previous one.

## **B. INVENTORY MANAGEMENT MODELS IN AN UNCERTAIN FUTURE**

These models are employed in probability situations, in order to prevent replenishments with delivery terms that cannot be guaranteed for, or overlapping of the two phenomena of demand and uncertain delivery terms. Irrespectively of the origin of the uncertainty, it is finally interpreted as a *random demand* in the replenishing period and as *stock-out risks*.

The proposed pattern regarding the management of the stocks in an uncertain future, also called **the pattern of the calendar management** consists in launching supply orders at regular periods of time and determines the level the stock needs to have at the beginning of the period of resupply.

The last part is intended for *the budget of supply* which is based on the monthly determination, staggered of the prognostic of command, delivery, consume and stock level, thus being effectuated in two ways:

**(a) in quantity**, case in which the budget offers a greater interest on behalf of the supply services.

**(b) in value**, through valorizing the previous quantities at a unitary standard cost, presentation necessary for establishing the global budget, the treasury budget and the anticipated financial situations.

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