FCS2013 Classic Edition

Previous versions reached a high level of maturity and reliability. It also found its place in the market, due to its functionality, performance and optimal positioning in price.

For all these reasons we decided to issue a new version, technologically upgraded, but keeping the functionality and the price. The technical upgrading implied a re-compilation and a substitution of components. This product is the **Classic** version. Although it keeps the basic functionality, a series of improvements, directly related to the flexibility and the usefulness, have been integrated. Some internal functions have been also redesigned, reducing even more the calculation time. The user interface has been improved. These improvements are listed and explained below.

FCS2013 ADVANCED

While FCS existence, the customers have been asking for a series of requirements with a higher level of exigency. As a result of that experience and of a benchmarking process with competent products, there has been designed a product of a great power. We commercialize it in a parallel and alternative way with Classic. Its name is **advanced.** With this product we can work out the 95% of the already known situations. This product has a higher price. The current users can migrate to **advance** and their investment will be respected.

Both products are compatible with all versions of Navision since 2.01 to the actual NAV2013 for the time being.

Features (for both Classic edition and Advanced)

1 Graphical representation of the capacity

The Gantt graphic displays the intervals of capacity time separated from the non capacity ones (night break, weekend, vacation, etc).

This is displayed in particular for each one of the resources to plan.

2 *Drag&drop*: 2 types

When putting forward an operation directly on the graphic, it is possible to choose between moving only the current operation, regardless of the following operations of the same PO, or making the following operations of the same PO to move in conformity. Drag & drop in a grid type form. It's been implemented a facility of changing the sequence of a machine by making the drag & drop over the lines of the "Resource operation" form.

3 Calculation options of the launched operations.

There are two options to calculate the starting time of the launched operations:

a) The planed starting time is fixed with the value it has when releasing the PO. From this moment on, variations of the planned ending time will be calculated when posting the *output journals*.

b) The operations are recalculated as if they were planned operations.

4 More information in the graphic window

Two new information zones have been implemented in the state bar:

- Day and time of the current position of the cursor.
- Information regarding the operation to which the cursor is pointing.

Those two zones reduce the quantity of times that the user needs to open the operation card.

5 Starting moment of the planning

Up to now, the starting time of the planning was the present moment. With this new parameter it is possible to plan with the minimum starting time placed in the future.

6 New graphs

Machine saturation by different periods of time (days, weeks, months, etc).

7 Gantt printing in graphic format

It allows selection of several time horizons.

Features for Advanced edition only

1 Infinite capacity mode

It is controlled by means of a flag. The infinite capacity mode is used to calculate the plan without restrictions by resource. Once calculated, the saturation and the required capacity in each period of time will be graphically displayed. The concept is similar to the one of the load form of the Machine Center in Navision. The advantages are the graphic representation and the fact that in the FCS the saturation by machine is studied after balancing the load of the Machine Centers.

2 Modifying the capacity

Two ways of modifying the capacity have been developed, one graphical mode and another one by means of a dialog box. In addition, some facilities to repeat “n” times the modification of the capacity have been included. For “n” days in the same machine or in different machines.

This is useful in situation of overtime, special turns or disqualification of machines due to maintenance or moving.

These modifications of the capacity will be reflected in Navision, when saving changes, as calendar entries.

3 Modifying times

It has been implemented a new functionality that allows the planner to manually modify the setup time, the execution time and the overlapping.

This is very useful when grouping several operations of equal or similar products so some of the preparation times may decrease or be eliminated.

When saving the plan the “PO routing line” table of Navision is modified.

4 *Undo* and change analysis

Up to 5 plans are saved in memory, as a result of the 5 last changes. With the *undo* function we can go backwards one by one.

It is also possible to select by menu any of the 5 plans.

The impact of changes can be analysed by means of a new function. A window is open with the previous and current advancements and delays, plus a column with the absolute differences between both plans (the previous one and the current one).

5 "Save as..."

As many versions of plans as desired can be saved by means of this function.

6 Planning comparison

The same tool which is used in the analysis of changes (section 4) can be used to make planning comparison one against other.

7 Operation *Split*

This function is used to share out the quantity of an operation among "n" machines so that each one processes a partial quantity of the PO. It is very useful under pressure situations. Alternative machines

This function allows managing situations in which, for each item, there is a different sub-set of competent machines in one same work centre.

This is defined in the standard route so that it will be the FCS who makes the selection of the best machine for each PO.

Each machine can have different preparation and process time for the same item.

8 Simple restriction by worker, mold, etc.

The user can add an additional restriction to the system by means of a parameter. The restriction can be the worker, a mold, a tool, etc. This is defined in the setup form.

We say that it is simple because this criterion of restriction doesn't have calendar or capacity number. What the system does is to verify that there are no two orders using simultaneously the same resource.

9 "Train" type programming

Establishment of a classification/grouping criterion for the orders, by a technical characteristic. Moreover, the establishment of an impact gauge of these groups.

The grouping techniques of the orders are focused to improve the productivity by means of the optimization of the change times. However, they take a series of negative effects on the delivery lead time and on the WIP. The impact gauge is the tool that the planner uses in order to increase or to decrease as much the grouping as its impact.

When this type of programming is used, a series of tools is added which allows to graphically see the resultant groupings. Something very similar is implemented in the "Load by resource" form.

10 Forced movement of an operation

In the actual version of FCS when an operation was manually moved on the graphic the system calculates the best starting and ending moment of the operation regarding to the selected adjustment type.

Now it is possible to choose (by means of a key) that the system avoids that calculation and leaves the operation in the exact place where the user leaves it providing that this does not violate any of the basic criteria.

11 Fixing operations

You may choose to absolutely fix date, time and machine of one operation.

12 Changing the adjustment for an order

Currently the adjustment refers to the whole plan. From this version on, the adjustments will be able to be defined for each order individually. The purpose of the adjustments is to saturate the machines or to adjust the planning times to the delivery time or to the last operation time.

13 Flexibility in simulations

This feature allows eliminating the restrictions one by one or several at a time in order to make simulations like *how the plan would be if it wouldn't mold restrictions?*

14 New graphs

- **Delays by item**. Item histogram, each bar represents the nº of PO which is delayed one day, two days, etc.
- **Delays by mold, worker, etc**. Similar to the previous.

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