

Features of Planning Board

- Graphic planning board
- Any number of factories or production areas can be defined. Similarly any number of production lines within the factory can be defined..
- Flexible calendar. You may define any number of calendars so that the calendar can be applied to the factory, or to the production line or even to a specific order style
- No. of operators or machines can be defined at the production line level or to a particular order style.
- Unlimited number of learning curves or startup allowance can be defined and applied to an order style.
- Split one order quantity into multiple production quantities
- Group multiple order styles quantities as single production unit so that single planning can be done for a group of similar order styles
- Combined view of all the planned process for an order style (Not yet done)
- Comparison between planned and actual production
- Automatic calculation of number of days required for production based on following details .
 - SMV of the style being produced
 - Factory production line capacity
 - Efficiency % of the line or the product
 - Absentism % in the line
 - Learning curve
 - Calendar (working days/holidays)

- Integrated with TOPS/erp
- Use of color highlighting of order strip to show its properties

Sample Screens

Order Details Help

Planning Board

Sat 06/12/2003 30/11/2003 07/12/2003 14/12/2003 21/12/2003 28/12/2003 04/01/2004 11/01/2004 18/01/2004

[20031206:E-SOFTLINE01] S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S

Load Allocated Styles to PB!

Buyer Code	Our Style	Buyer Style	Boc.Type	Boc.No	Del.Date	Quantity	Smv	Comp.Code	Style.Sit.No	Location.Cod	split_no
A & E	5555-9	5555-9	NEO	4444	12/23/04	7956	0	E-SOFT	9	E-SOFT	0
A & E	5555-10	5555-10	NEO	4444	12/23/04	12456	0	E-SOFT	10	E-SOFT	0
A & E	COBRA-666	COBRA2	NEO	6666	12/5/04	15000	51	TREND	3	E-SOFT	0
A & E	5555-9	5555-9	NEO	5555	12/23/04	7956	0	E-SOFT	9	E-SOFT	0
A & E	5555-10	5555-10	NEO	5555	12/23/04	12456	0	E-SOFT	10	E-SOFT	0
A & E	5555-9	5555-9	NEO	3333	12/23/04	7956	0	E-SOFT	9	E-SOFT	0
A & E	5555-10	5555-10	NEO	3333	12/23/04	12456	0	E-SOFT	10	E-SOFT	0

* For selecting a record click on the left most button in the grid and to select multiple records hold the Ctrl and Shift keys pressed

Load... Cancel

Line Efficiency
No Of Operators

Buyer Code	Our Style	Buyer Style	Delivery Date	Quantity	Start Date	Start Hour	Factory Line	End Hour
No. Of Days	Statup Allow. ID	Startup Location	Smv	No.Of.Workers	Attendance Ratio	Split No	Capacity per Hour	

The above screen shows loading orders to planning board. You can select the orders which needs to be loaded on to planning board for scheduling the production.

You may plan all processes involved in making a garment from cutting onwards to finishing and packing.

Order details with daily production qty

The screenshot shows the 'Order Details' dialog box in the Planning Board software. The dialog contains the following information:

- Order Details:** Buyer Name: A & E; Buyer Style: 5555-7; Our Style: 5555-7; Quantity: 8000; Expected Start Date: 12/1/03 12:00; Split Number: 0; Smv: 40.
- Production Table:**

Date	Quantity	No.Of.Hours	Efficiency.Pe
20031201	351	3	0.65
20031202	936	8	0.65
20031203	936	8	0.65
20031204	936	8	0.65
20031205	936	8	0.65
20031206	936	8	0.65
20031207	0	0	0.65
20031208	936	8	0.65
20031209	936	8	0.65
20031210	936	8	0.65
20031211	161	2	0.65
- Radio Buttons:** Stripwise (selected), Orderwise, Daily (selected), Weekly, Monthly.
- Legend:** Line Capacity (red), Absentism (blue), Line Efficiency (green), No Of Operators (dark red).

At the bottom of the window, there is a table with the following columns: Buyer Code, Our Style, Buyer Style, Delivery Date, Quantity, Start Date, Start Hour, Factory Line, End Hour, No. Of Days, Setup Allow. ID, Startup Location, Smv, No.Of.Workers, Attendance Ratio, Split No, Capacity per Hour.

Applying Startup Allowance

The screenshot shows the 'frmStartupAllowance' dialog box overlaid on a production quantity chart. The dialog box contains a table with the following columns: location_code, startup_allow, from_days, to_days, efficiency_p. The data in the table is as follows:

location_code	startup_allow	from_days	to_days	efficiency_p
HD	STYLETEST	1	2	0.6
HD	STYLETEST	3	999	0.7
HD	NEWSTYLE	1	2	0.6
HD	NEWSTYLE	3	4	0.72
HD	NEWSTYLE	5	6	0.8
HD	NEWSTYLE	7	999	0.9

Below the dialog box, there is a text instruction: "Point on the Strip You will get the Order Details on the Status bar." The chart shows production quantity over time for various lines, with different colors representing different status bars.

At the bottom of the window, there is a table with the following columns: Buyer Code, Our Style, Buyer Style, Delivery Date, Quantity, Start Date, Start Hour, Factory Line, End Hour, No. Of Days, Setup Allow. ID, Startup Location, Smv, No.Of.Workers, Attendance Ratio, Split No, Capacity per Hour.

Split an order

The screenshot displays the Planning Board Ver 1.0 (Beta) interface. The main window shows a Gantt chart for a production order. The chart is organized by weeks, with dates ranging from 30/11/2003 to 18/01/2004. The chart shows various production lines (LINE01 to LINE09) and their respective quantities and start/end dates. A dialog box titled 'Splitting the Strip...' is open, showing a total quantity of 8000. The dialog has two radio buttons: 'By Quantity' (selected) and 'By Percentage'. Below these are ten input fields for splitting the quantity into 10 parts, each currently set to 0. The dialog also has 'Split' and 'Cancel' buttons. At the bottom of the main window, there is a legend for line capacity, absenteeism, line efficiency, and no of operators. Below the legend is a table with columns for Buyer Code, Our Style, Buyer Style, Delivery Date, Quantity, Start Date, Start Hour, Factory Line, and End Hour. The table is currently empty.

Other related Modules of Planning Board

Planning Board Calendar

Planning board calendar function can be used to define the calendar for a factory or a factory line. The PB calendar will be a record for each day of the year. Each daily record will contain the following information

The day id (dd/mm/yyyy)

Holiday or working day

No. of hours working per day

The very first step to use Planning board is to define a 'Default' calendar. You can work with the default calendar or create a calendar for each factory if the days or no.of hours working differs from factory to factory. Even you can create a calendar for a factory line if any line's working hours or days differs from that of the factory calendar or default calendar. Planning board uses this calendar to find out the number of hours the factory or the line operates on a daily basis. Based on the number of hours working, the capacity is calculated.

Once the calendar is created, you can attach the calendar to a factory or to a factory line using Factory master function.

Startup Allowance

Every product manufactured will have a different learning curve. You cannot get the same kind of efficiency on every product you manufacture at least for the first few days of

the production. To factor this efficiency you can use the 'Startup allowance' function to define startup allowance records and use these 'Startup allowance' when planning the production. For eg. If you are making jackets, you could define the start up allowance as follows

from 1st day of production you expect on 10% efficiency

from 2nd to 3rd day you expect 30% efficiency

from 4th day onwards you expect 60% efficiency

When an order of Jacket is planned on Planning board, you could choose the above 'Startup Allowance' and Planning board will calculate the daily production based on the above efficiency levels.

Similarly for a Shirt, you may define different efficiency levels

Factory Master

This function helps you to define the factories and its lines. You record the average attendance level while defining the factory and its lines. You can also attach a 'Calendar' (explained earlier) to the factory.

Style Operations

This function helps you to define the operation wise SMVs for a style. You can also record the average efficiency you are expecting, the number of workers etc for the style using this function. Planning board calculates capacity available, capacity utilized all in Minutes.

Calculations

Available Capacity in a factory

In Planning board, you allocate an Order to a factory for production using the 'Allocation' option. In the 'Allocation' screen, you can see a button called 'Show Capacity'. You may use this option to see the capacity available in a factory before allocating an order to the factory. The capacity available shown here is 'approximate'. The calculation of capacity available for a given date range is explained below.

- a) Total capacity of the factory in 'Minutes' = Total of 'No. of hours working' per day as per the Planning board calendar X no. of workers in the factory as per the Factory master X 60 minutes
- b) Capacity already consumed = From the date range the order is being planned as per the Planning board, get the no.of hours working for each day from the Planning board calendar (default calendar or factory calendar) X no.of workers in that line as per the Factory line master X 60 minutes
- c) The difference between the above two will give capacity available.
- d) There may be orders which are allocated to a factory, but not planned. To know the real capacity available, we need to consider these orders as well. These order's

capacity required is calculated as Quantity X SMV of the order. Since these orders are not planned, the orders are selected based on their delivery dates. All orders with delivery dates between the given date range is selected.

e) Then there are orders which are allocated to a factory, but no SMV defined. The total quantity of these orders are also shown. These orders are also selected based on their delivery dates since these orders are not 'Planned'

Calculation of no. of days required for production on Planning Board

The calculation of no. of days required for an order is based on many variable factors. These are explained below

a) The capacity available in 'Minutes' needs to be calculated for each day from the starting day.

a.1 The capacity available is based on the number of hours working per day. This is taken from either the Line calendar if it exist or from Factory calendar or from Default calendar.

no. a.2 The total number of available minutes is calculated by multiplying the of hours per day with 60. This is defined through the 'Factory master' as Capacity per hour

a.3 This value is multiplied by the no. of workers in the line define for the style through 'Style Operations' function. No. of workers also can be defined in the Planning Board Calendar for a particular day if the day wise number of operators needs to increased or decreased

a.4 Efficiency for the day is applied. Efficiency percentage is taken either from 'Startup allowance' if startup allowance is applied for this order or from Style's line efficiency as defined through the 'Style Operations' function.

a.5 Attendance percentage. This is taken from Factory line master defined using Factory master function.

a.6 Multiplying all the above will give you the capacity per day in Minutes

b) Calculate the no. of Pieces which can be made within the Available Capacity per day (see a). Available minutes per day divided by SMV of the style will give the number of pieces that can be manufactured for that day. SMV of the style is defined using the 'Style operations' function.

The above steps 'a' and 'b' is repeated until the total of all daily quantity produced is equal to the order quantity.

System Requirement

Pentium III or above with 256 MB RAM, 40 GB HDD
Windows XP

17" SVGA Monitor
2 MB video memory, Resolution 1024 x 768