

Preactor AS Advanced Scheduling for Sage™ ERP

What is scheduling?

Making an efficient sequence in which to run the production jobs, giving a predicted finish date. Providing Work To Lists to the factory for visibility of what to run next. And information for purchasing and customer service teams. All based on an achievable, capacity constrained schedule.

Allowing you to make better decisions more quickly.

slect Data Integrations for Sage™ ERP systems*

One data interface program is used to interface between Preactor and any of the ERP systems, meaning that the entire scheduling system can go with you if you choose to move between Sage™ products.

Sage™ 50 Manufacturing

- SQL to SQL data import from the ERP to Preactor for manufacturing data.
- ODBC to SQL imports used for data held in the accounts database.

Sage™ 200 Manufacturing

- SQL to SQL data import from the ERP to Preactor.

Sage™ 1000

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- Updates back to the ERP system of scheduled resources and start / end dates.
- Mass release of MRP suggestions up to a time fence, allowing easy creation of many WO via the "Raise Approved (MRP) Orders" ERP program. **

Sage™ Enterprise Management (X3)

- SQL to SQL data import from the ERP to Preactor.
- Updates back to the ERP system of scheduled resources and start / end dates.
- Mass release of MRP suggestions up to a time fence, allowing easy creation of many WO via the "Automatic Releases" ERP program. **

All Imports to Preactor include:

- Inventory.
- Purchase orders.
- Works Orders (WO), with Routings and Bill Of Materials.
- MRP production suggestions, with Routings and Bill Of Materials.
- Sales Orders (SO).
- Status changes to works orders based on operation level SFDC tracking.



The import is flexible, any data from the ERP system can be included. No CSV files are used in this process.

The integration package also includes a set of reports:

- Work To Lists for each resource.
- Capacity versus Load bar charts.
- Material shortage list, by WO scheduled start date.
- Purchase order chase list, by WO scheduled start date.
- Sales order available date prediction, based on Preactor dynamic links between WO and SO.

* All the above require that the ERP database can be directly accessed using SQL logins and commands. Cloud based databases are not supported if the data can't be accessed in this way.

** Only with Preactor AS ULTIMATE

SQL server must be 2008R2 or later.

Preactor AS Product Range

If one of the primary outputs of the schedule is a prediction of when orders will be ready to ship, then the more accurately and fully that we can model your factory and processes, the more accurate the outcome. Below is a simplified explanation of the differences in the product range. As ever, the only sensible way to choose software is to discuss your business requirements so that we can advise on the right solution. Volumes of data, levels of BoM, purchasing and factory constraints and many more considerations come into play. Start by thinking about this question, our task is to make the software follow your answer:

"When a resource finishes a job next Tuesday morning, how do you decide what to run next?"

AS STANDARD

- Manual drag and drop.
- Simple automated scheduling.
- Ideal where there are no material constraints, so 1 level of BoM and all purchased items can be sourced in time for the factory schedule.
- Multiple secondary constraints (Tools, Power etc).
- Limited modelling capability.
- Limited fields available to accept ERP data.
- Locked down configuration.

AS PROFESSIONAL

- More complex automated scheduling.
- Good control of material constraints, works well with multi-level BoM. Purchase order dates can be used to drive production earliest start dates. BoM lines may be linked to operations.
- Material Explorer to visualise links between supply and demand.
- Still limited modelling capability, but more spare fields.
- Locked down configuration.

AS ULTIMATE

- Sophisticated automated scheduling. E.g. Minimise setup, based on sequence dependent setup times.
- Full control of material constraints. Links between producing and consuming orders can be forced to follow a priority that matches the scheduling priority, actual schedule start dates can influence the flow of upstream materials.
- Trial kitting analysis.
- Full modelling capability:
 - Database fields and tables can be added and relationships defined to suit your model.
 - "API" allows writing of custom functionality to manipulate data and / or create your own scheduling rules.
 - Functionality can be moved between fields and tables.
- Closer integration to ERP systems, such as release of MRP suggestions that fall within a firm schedule period.
- Easier and faster to create "What If" scenarios.

Increasing accuracy of the model = Improved predictions

Setup Time—Paint Line Example:

Routing imported from ERP says 150 minutes, and an attribute in Preactor says that ANY change in colour needs a "Fixed" 4 hours, depending on the resource selected. You have an option to use the sum of those two elements, or the longest.

Concurrent Setup?

Setup Time:

As above, but now the attribute in Preactor allows the change in colour to be a "Matrix" of From/To times. Going from white to blue takes 1hr, but from blue to white takes 10hrs. See Fig 1 below. Limited number of places where setup calculations can be applied.

As above, plus other mechanisms such as:

- ⇒ "Like to Like",
- ⇒ "Unlike to Unlike",
- ⇒ "First job on Resource"

Unlimited number of "Fixed" and "Matrix" mechanisms, assigned to any properties of resources and products. E.g. On a filling line, Preactor detects the bottle, cap and liquid product codes via the BoM and calculates a setup time to use, depending on which (if any) of those 3 elements will change from one job to the next.

		To Setup Groups		
		BLUE	GREY	WHITE
From Setup Groups	BLUE	00:00:00	01:00:00	10:00:00
	GREY	00:30:00	00:00:00	09:00:00
	WHITE	01:00:00	01:00:00	00:00:00

Fig 1. Typical matrix on a painting resource, going from white to blue takes 1hr, but from blue to white takes 10hrs: