

Reduce Trim, Increase Corrugator Productivity

Far better than any planner, PC-Topp's Corrugator Scheduling finds solutions that bring down trim, increase the average roll width, and smoothen production flow by fewer changes on fewer paper sizes. PC-Topp knows all the tricks of the trade, and if your planner knows a better one, PC-Topp helps him express himself.

Use Modern Pull-Planning to Reduce Work in Progress, Eliminate Downtime for Lack of Work

Pull Planning lets you see into the future, allows you to anticipate bottlenecks before they occur. That way, you should never again have to stop a machine for lack of work, or be surprised that some orders cannot be finished on time. And work in progress will go down dramatically, because PC-Topp suggests exactly which orders must be run on the corrugator, and at what time.

React Flexibly to Last Minute Changes or Production Incidents

Customers today tend to place their orders in later and later, and then change them at the very last moment. King customer reigns - in order to stay competitive, you have to comply. PC-Topp helps you make those last minute changes with ease, and lets you recognize and eliminate any long term consequences of such a change. And when a breakdown or some other incident ruins your elaborate plans, PC-Topp helps you react and minimize the damage.

Keep Everybody Informed about Order Progress, Plant Load

PC-Topp becomes the information central of the plant, allowing easy access to information not just to planners, but to everybody involved: Sales can check machine capacity and plant loading as well as order progress, Production knows schedules and material requirements in advance, Management can monitor live production or analyze fresh production statistics. With PC-Topp Web Access, even customers can check the status of their orders on-line.

Smurfit Packaging Italia, Novi Ligure: Large Reduction of Work in Progress

"PC-Topp has done all that was promised," says Michael Piese of Smurfit Italy in Novi Ligure. "After the first few weeks, it allowed us to stop the corrugator for two full days, without missing a single delivery." But that drastic reduction of work-in-progress was only part of the results they achieved: "Before, we had a large number of different roll sizes. Today, 80% of our production comes out of our largest paper width, with enormous gains in productivity and savings in reel changes."

Rossmann S.A., La Vancelle: No More Unwanted Downtime

"Our problem was the extremely limited intermediate storage area. Often, we had to stop the corrugator although the machines urgently needed the sheets," says Laurent Gangloff, Chef de Fabrication at Rossmann. "With PC-Topp this just doesn't happen anymore. And the increase in productivity allowed us to eliminate 2-3 hours of costly corrugator overtime every day!"

PC-Topp 2000 Feature Summary

Corrugator Scheduling

- Automatic Optimisation
- Interactive Planning
- Single Knife Scheduling Module
- Excellent control over overmakes
- "Almost Zero Overmake" mode for the Japanese market
- Automatic Pinching
- Can produce subsequent identical jobs as one order.

Conversion Machine Scheduling

- Automatic pre-scheduling of incoming orders
- Interactive fine planning under operator control
- Easy grouping of identical orders or similar colors
- System automatically flags late orders and orders arriving late from previous operation.
- Schedules are permanently kept up-to-date by feedback from corrugator and shop floor data collection.
- Pull Planning eliminates unnecessary waiting for job and drastically reduces work in progress.

On-line Link to the Corrugator

- 20 years of experience with links to corrugators from Agnati, BHS, BHS/Witron, Copar, Fosber, Peters, Marquip, MHH/Mitsubishi, SWS/Simon
- Download of filter-screen settings, all schedule details
- Perfect positioning of jobs on cut-offs using detailed rules
- Upload of production actuals, downtimes, shift information (where provided by the corrugator)
- Schedules, order progress permanently kept up-to-date
- Corrugator Terminal for manual entry of production progress where on-line data is not available

Shop Floor Data Collection

- PC-Topp Machine Terminal uses standard, networked PCs.
- Links to any conversion machine using a simple courier.
- Terminal displays schedule and order details.
- CAD drawing for current order appears prominently on screen, access to all drawings for scheduled orders.
- Automatically sense Start of Setup, Start of Run, End of Run, Downtime, Breaks
- Detailed manual entry of produced quantities, waste per categories
- Quality checks after a variety of events
- Customer complaints displayed when job runs again
- Shift change information, personnel in attendance
- Detailed shift report under operator control
- On-Screen performance indicators
- Machine performance diagrams for instant evaluation

On-Line Link to Conveyor Systems

- Automatically identifies stacks exiting the corrugator.
- Directs required orders to conversion machines.
- Years of experience with Dücker, Martin, Minda, Pentek

*Partial language support only, some parts of the system appear in English

Live Production Monitor

- Key information at a glance: Machine status, production speed, downtime cause
- View current order and up-to-the-minute order progress.
- Includes corrugator and conversion machines with or without terminals.
- Receive alerts when excessive downtime requires action.

Comprehensive Sales Information

- Graphical TCI Machine Load identifies first available day
- Sales Terminal offers quick access to order status, production progress, CAD graphics

Extensive Production Statistics

- Detailed production report, performance analysis
- Summaries per day, week, month, year or other period
- Downtime analysis
- Corrugator production and trim report

New: Graphics on Every Desktop

- Access drawings, printing and cutting dies, spec sheets.
- Supports Adobe Acrobat PDF, Artioscad Viewer, all file formats supported by Windows, any Windows application
- Available at Machine Terminal and all other PC-Topp workstations, including the Free Terminal
- Graphics accessible via Internet in PC-Topp Web Access

Palette Labeling

- Fully customized labels on HP Laserjet printers
- Internal / External labels, customer specific labels
- Limited barcodes

Windows Palette Labeling System (optional)

- Graphical label design, also by customer's IT department
- All standard barcodes including UPS, SSCC
- Graphics, all Windows fonts, any Windows printer

Integration with Commercial Host System

- Links to any commercial system: SAP, R/3, Volume Software, or customer's own
- Order data transfer, paper stock, materials availability
- Schedule data, order status, production details
- Export production statistics data to spreadsheet

Internet User Interface

- Microsoft Internet Explorer as primary user interface
- Easy to learn, quick mouse or keyboard operation
- Supported languages: English, French, German, Italian, Spanish, Swedish, Polish, Portuguese
- On-screen preview of reports supporting outposts

New: PC-Topp 2000 Web Access

- Customers access order status via the Internet.
- Sales agents check machine load, orders, production progress from anywhere.
- Management and planners view plant overview and schedules, take corrective action without being on site.

Our Customers: Leading Plants Worldwide Use the PC-Topp Scheduling System

- **Argentina:** Smurfit
- **Belgium:** Smurfit-Stone
- **Cameroon:** Rossmann
- **Denmark:** SCA, Kappa
- **Dominican Republic:** Smurfit
- **France:** Allard, Emis, Kaye
- **Germany:** Rossmann
- **Italy:** David S. Smith, Rossmann, ALCO, Rossmann, Smurfit, Socar
- **Germany:** SCA Packaging, Seyfert
- **Ireland:** Smurfit
- **Italy:** Andrà Ondulati, Benedetti, Big Time, Busto Cartotecnica, Corsonna, Cartoplave, Fomos, Icom, Icos-Bi, Lacor, Ondaplant, Ondulati Grimaldi, Ondulati del Friuli, Ondulato Lechese, Ondulati Nordest, Ondulato Salemitano, Ondulor, Rossmann, Sandra, Simon, Sisa, Smurfit, Zetacarton
- **Italy Coast:** Rossmann
- **Japan:** Dai-ichi
- **Lebanon:** Geneyel
- **Madagascar:** Kappa
- **Malaysia:** Smurfit, Sultana
- **Morocco:** Casad, Ondulim
- **Netherlands:** Kappa
- **Norway:** Peterson Sarpsborg
- **Poland:** Intercell, Rossmann, David S. Smith
- **Portugal:** Portucel, Zarrinha
- **South Africa:** Seyfert
- **Spain:** Rossmann
- **Sweden:** Kappa
- **Switzerland:** SCA
- **United Kingdom:** David S. Smith Correx, Encase, Kappa, Smurfit Cundell
- **Venezuela:** Smurfit

NEUGEBAUER
Ingenieurbüro für Computer-Software
www.pctopp.com

Neugebauer Software
Passauer Str. 30
90480 Nürnberg
Germany
Tel. +49 (911) 99 400-0
Fax +49 (911) 99 400-33
info@pctopp.com

PC-Topp

The Experienced Scheduling System

Connect Planning On-line to Corrugator and Conversion Machines

PC-Topp links on-line to all modern corrugators for schedule downloads at the press of a button and instant feedback from production. PC-Topp Machine Terminals show schedules, order details and CAD drawings right at the machine, and provide comprehensive shop floor data collection for detailed production analysis and permanent up-to-date information on production progress.

Tight Production Control through Instant Feedback from Production

Rather than being surprised by incidents in production after the end of a shift, PC-Topp alerts you in real time, allowing you to take action immediately. Stay informed - stay in control: Because PC-Topp visualizes the long term effects of a breakdown, you can intervene and minimize any damage before it's too late.

New: Access CAD Drawings, Order Documents Anywhere in the Plant and in the Office

PC-Topp 2000 shows CAD drawings, order spec sheets with graphics, or print and die-cut schemas with a simple mouse click, the PC-Topp Machine Terminal puts the drawing of the box right in front of the eyes of the machine operators. And at no extra cost, PC-Topp can give access to graphics to everybody in all departments, even over the Internet.

New: Use the Power of the Internet Web Access for Customers, Sales, Management, Planning

Have you always wanted to let your key customers check the status of their orders on-line, without having to call your Sales department, or even Planning? Does your off-site sales force need access to order progress and machine capacity? Would you like to check production figures and view production from anywhere, let your planner resolve a critical situation from home, without having to come in on his free day? Well, now you can - PC-Topp Web Access lets you do all this, and even more.

Zarrinha S.A., Paços de Brandão: Space for New Machine

"After using PC-Topp for six months, we had reduced the finished goods store by more than 75%," says production manager António França. "This gave us the much needed space to put in a new machine, not to speak of the savings in capital and the inevitable waste that occurs when products are in store for too long." Needless to say that this was achieved while still keeping customers happy by reliable on-time deliveries. During the same period, side trim went down by a remarkable 0.5%, and the volume of Work-in-Progress was reduced by more than 50%.

Smurfit Corrugated Cases, Lurgan: Impressed with service

"Whenever we call, we always have someone competent on the line who knows what he is doing and helps us to get things to work again quickly and painlessly," says system administrator Colin McWilliams. "I rate the PC-Topp service number one among all our other IT suppliers."

The Company

Close to 30 years of development and the experience from almost 200 plants stand behind PC-Topp 2000, the Intranet-based version of Europe's leading integrated solution for scheduling production on the corrugator and conversion machines.



"When I first came into a corrugated box plant in 1974, still as a student of computer science, I had no idea that I would still be working for this fascinating industry 25 years later," says Rainer Neugebauer, head of a team of specialized software developers. "Today, many of the great names of the industry are using our system for scheduling their production."

"We started on then-modern Wang systems – today we're using Internet technology to meet the needs of our customers."

The Product

PC-Topp was designed to integrate itself smoothly with any ERP or order entry system a customer may be using, bridging the gap between commercial order processing on the one hand and planning and production on the other with a cost effective and proven expert solution. The integration can be so tight that an order appears in Planning just seconds after it has been received by Sales, and production progress is visible in the host system in almost real time.



PC-Topp 2000 doesn't make your IT investment obsolete, it takes your existing business system one step further – and it will fit anywhere.

Designed for networked PCs running under Windows, PC-Topp is easy to implement in any environment. With the Internet Explorer as its primary user

interface, it is as easy to learn as it is to use in everyday work. And because PC-Topp is based on an application framework that has been proven over many years in dozens of plants, our system offers the reliable and stable operation that your plant requires.

Modern Scheduling

With PC-Topp, planners quickly adopt Pull Planning, the modern approach to scheduling: Rather than creating corrugator schedules first and then lining up the orders on the conversion machines, Pull Planning lets the planner create a longer term plan for each machine in the first place. Knowing which orders are needed when in conversion, PC-Topp then makes sure that just the right orders are put on the corrugator, reducing work-in-progress while guaranteeing the smoothest possible flow of production on that largest and most expensive of all machines.

While offering automatic functions where they make sense, PC-Topp lets the planner maintain control, and the resulting schedules benefit from his experience and common sense.

PC-Topp 2000 in the Office

Corrugator Scheduling

Following the requirements of conversion, PC-Topp suggests which orders need to be corrugated. Cost factor based Optimisation finds excellent results automatically, while Interactive Planning puts the planner in control. The result is a perfectly sequenced schedule for best productivity and trim, and every order is available in conversion just in time, when it is needed.

Conversion Machine Scheduling

PC-Topp automatically pre-schedules every order for production, and gives the planner a highly efficient interactive tool to establish the optimum production sequence. The continuously updated schedules make it easy to react to incidents, or when some urgent last minute order must be squeezed in.

Sales Information System

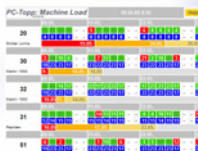
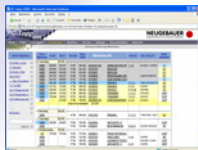
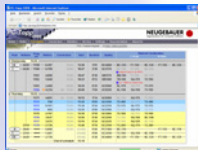
The PC-Topp Sales Terminal lets sales agents check order status and production progress on-line, eliminating the need to call Planning to obtain that information. Detailed up-to-date information on plant loading is available in graphical form, helping Sales to set realistic delivery dates.

New: Drawings on Every Desktop

With one click, PC-Topp shows the spec sheet of an order, a print sample, or a die-cut forme. CAD graphics, drawings, any available document can be made accessible through PC-Topp throughout the plant, in the office, directly at the machine, or even via the Internet.

New: PC-Topp 2000 Web Access

Web Access lets key customers check the status of their orders over the Internet, sales agents can access order progress and plant loading from wherever they are. Management can view live production figures, and in an emergency, the planner can check and modify the schedules from home.



PC-Topp 2000 on the Shop Floor

On-Line Link to the Corrugator

Available for all modern corrugators, the on-line link transmits all schedule details directly to the corrugator, and keeps the schedule up-to-date with permanent feedback from production. Alternatively, the Corrugator Terminal allows manual entry of production progress.

Shop Floor Data Collection

The PC-Topp Machine Terminal displays up-to-date schedules and order details at each machine, puts CAD drawings right in front of the crew. Linked to the machine's counter, it watches production and detects and records all events like breakdowns, setups or shift changes. Any delays or sequence changes are instantly reflected in the schedule and thus visible throughout the system.

Live Plant Overview

This "Window on the plant" lets you watch production without leaving your desk: Which order runs on each machine, at what speed, how far production has progressed ... you can actually see the machine's counter tick in real time! One mouse click takes you to the machine's schedule, the current order, or the performance diagrams for the day.

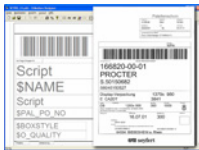
Production Reporting and Statistics

Downtimes, setups, production counts – all production events are recorded and archived, forming the basis for comprehensive production reports, available instantly and for any period in time. Graphical performance diagrams make it easy to analyze a shift in detail. All production data can also be shared with the host system to replace costly manual data entry.

Pallet Labels

New: Windows Pallet Labeling System

Shipping labels as well as internal tags with fully personalized design can be printed in a variety of ways, including customer specific designs, complex barcodes (SSCC) and logos. A graphical design module allows the creation of layouts by in-house personnel.



System Architecture and Requirements

System Structure, Network Architecture

PC-Topp 2000 uses a central file server as data repository (the server can be shared with other business applications). The Intranet functionality is provided by a dedicated Services PC acting as an application server, responsible also for the permanent data exchange with the host system.

Those servers are linked to the client PCs by a switched high speed (100 MBit/s) network, preferably using structured Category 5 cabling or fiber optic links for longer distances. All printers should have a direct connection to the network (print server).

Operating System

PC-Topp 2000 requires Windows 2000 or NT 4 servers and Windows XP, 2000 or NT 4 on the client PCs (For some applications, Windows 98 can also be used). Internet Explorer in an up-to-date version is also required. For PC-Topp Web Access, a Microsoft IIS web server must be permanently connected to the Internet.

Training, Start-Up Assistance

The introduction of PC-Topp means new methods in Planning and Production, but also involves Sales, Management, and IT Services. Good preparation and organization help to make a smooth transition in a surprisingly short time.

Programming of the Data Exchange with the Host System

- Usually done by the customer's IT department
- **Pre-Installation Training in Nürnberg**
- Three to four days in our office in Nürnberg
- PC-Topp in a simulated production environment, practical introduction to basic concepts and procedures

Software Installation

- Support during entry of basic data and parameters
- Start-up of order data transfer
- On-line connection to the corrugator (or PC-Topp Terminal)

Personalized Modifications

- Personalized reports and pallet labels
- Personalized fields on-screen and in printed reports

Introduction Phase 1: Planning, Connection to Corrugator

- Re-create existing corrugator schedules in PC-Topp
- Manual data entry of production in conversion
- Synchronize with actual situation in plant
- Start of active planning with PC-Topp

Introduction Phase 2: Pull Planning, Preparation for Shop Floor Data Collection

- Extend pre-planning over a period of several days
- "Smarter" selection of orders for corrugator scheduling
- First Machine Terminal for training purposes

Introduction Phase 3: Shop Floor Data Collection

- PC-Topp Machine Terminals at all machines
- Integrate CAD drawings
- Support during operator training

Support, Software Maintenance, Upgrades

We are there for you when you need help: PC-Topp runs very reliably, systems have been running for years with no intervention from outside. But when a client needs support, we help via telephone, modem or on-site, with the shortest possible reaction time. This is how we can have satisfied customers even on the opposite side of the earth.

With PC-Topp, your system stays up-to-date: Under the Software Maintenance Contract, you receive updates and new functionality without paying any additional license fees.