

PC-Topp.NET, the New PC-Topp Generation

PC Topp.NET unites all the strengths of our expert solution with the advantages of a web server application - high speed, improved performance, more independence: PC-Topp.NET can be used on any PC on the customer's network, or even across the Internet. We offer a free trial version of PC-Topp.NET on <http://demo.pctopp.com>

System Architecture and Requirements

System Structure, Network Architecture

PC-Topp.NET 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 Service 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 Fast Ethernet or Gigabit 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.NET requires Windows 2003 Server, and Windows XP plus Service Pack 2 on the client PCs. Internet Explorer in an up-to-date version is also required. Additionally, Internet Information Services, Microsoft .NET Framework 2.0 and MSDE or SQL Server have to be installed on the PC-Topp Service PC.

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 Corrugator 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.

PC-Topp.NET Feature Summary

PC-Topp.NET - Performance, Speed, Flexibility

- Use PC-Topp at any workstation on the plant's LAN or WAN, or even via public Internet.
- No client installation required.

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
- Automatic Optimisation finds best order sequence for you. 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

- 25 years of experience with links to corrugators from Agnati, BHS, BHS/Witron, Copar, Fosber, Peters, Marquip, MHI/Mitsubishi, SHS/Simon
- Download of slitter-scoring 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 counter.
- Terminal displays schedule, order details, graphical machine view, messaging, quality checks after a variety of events etc.
- 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
- Customer complaints as well as warnings about difficult customers guide the machine crew.
- Shift change information, personnel in attendance
- Detailed shift report under operator control
- On-Screen performance indicators
- Machine performance diagrams for instant evaluation

- *Partial language support only; some parts of the system appear in English.

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

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

Extensive Production Statistics

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

Access PC-Topp Data in a SQL Server Database

- Create customized production reports and statistics
- Database access via any application supporting SQL

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.

Pallet Labeling

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

Windows Pallet 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, Danish*, Lithuanian*, Norwegian*, Polish, Portuguese*, Russian, Swedish*
- On-screen preview of reports supporting cut & paste

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

- **Algeria:** Tonic Emballage
- **Argentina:** Smurfit Kappa
- **Cameroon:** Rossmann
- **Chile:** Smurfit Kappa
- **Denmark:** SCA, Smurfit Kappa
- **Dominican Republic:** Smurfit Kappa
- **Estonia:** SCA
- **France:** Allard, David S. Smith, Emin-Leydier, Mondi Packaging, Rossmann, Seyfert, Smurfit Kappa
- **Germany:** SCA, Seyfert
- **Ireland:** Smurfit Kappa
- **Italy:** Adda Ondulati, Cartiera Ondulato Umbro, Galimberti, Gariboldi, Ghelfi, Grimaldi, ME-CART, Ondaplant, Ondulati del Friuli, Ondulor, Polypack, Rossmann, Sandra, Smurfit Kappa, and others
- **Ivory Coast:** Rossmann
- **Japan:** Dan Au
- **Lebanon:** Gemayel Frères
- **Lithuania:** SCA
- **Madagascar:** Newpack
- **Mexico:** Smurfit Kappa, Sultana
- **Morocco:** CMCP
- **Netherlands:** Smurfit Kappa
- **Norway:** Peterson, Smurfit Kappa
- **Poland:** David S. Smith, Rossmann, Stora Enso, Werner Kenkel
- **Portugal:** Portucel, Vouga, Zairinha
- **Romania:** Romcarton
- **Russia:** SCA
- **South Africa:** APL, Seyfert, Unicolor
- **Spain:** Europac, Rossmann
- **Sweden:** Smurfit Kappa
- **Switzerland:** SCA
- **Tunisia:** SES, Unipack
- **United Kingdom:** David S. Smith, Majestic, Smurfit Kappa
- **Venezuela:** Smurfit Kappa

The Company

More than 30 years of development and the experience from over 250 plants stand behind PC-Topp, the Intranet-based version of Europe's leading integrated solution for scheduling production on the corrugator and conversion machines.

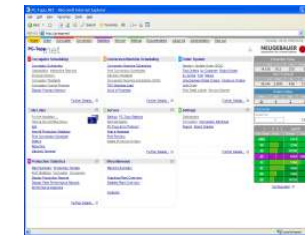


"When I first came into a corrugated box plant in 1974, still as a student of computer science, I had no idea that I would still be working for this fascinating industry 30 years later," says Rainer Neugebauer, head of a team of specialized software developers. "Today, many of the great names of the 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 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.

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.

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.

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

PC-Topp 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.

PC-Topp.NET 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. "Optimize This!" makes sure that all orders are on time, similar jobs are together etc. The continuously updated schedules make it easy to react to incidents, or last minute changes.



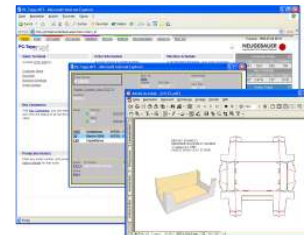
Sales Information System

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.



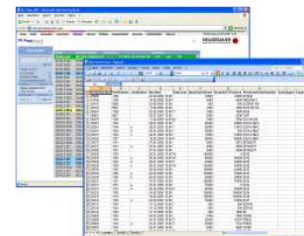
Drawings on Every Desktop

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.



PC-Topp Data Available in a SQL Server Database

With this optional feature all live PC-Topp data as well as production history is accessible in a SQL Server database and can be used for customized production reports integrated in web applications. Data can be accessed with Crystal Reports, MS Excel, or any other environment capable of using SQL Server databases.



PC-Topp.NET 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 gives semi-automatic on-line feedback 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.



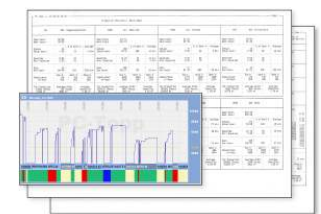
Plant Summary

The Plant Summary supplies information on the current job, key data on the last three shifts for all machines including the corrugator(s) at a glance. And it gives you direct access to the production statistics data for any particular shift on any of the machines.



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 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.

