

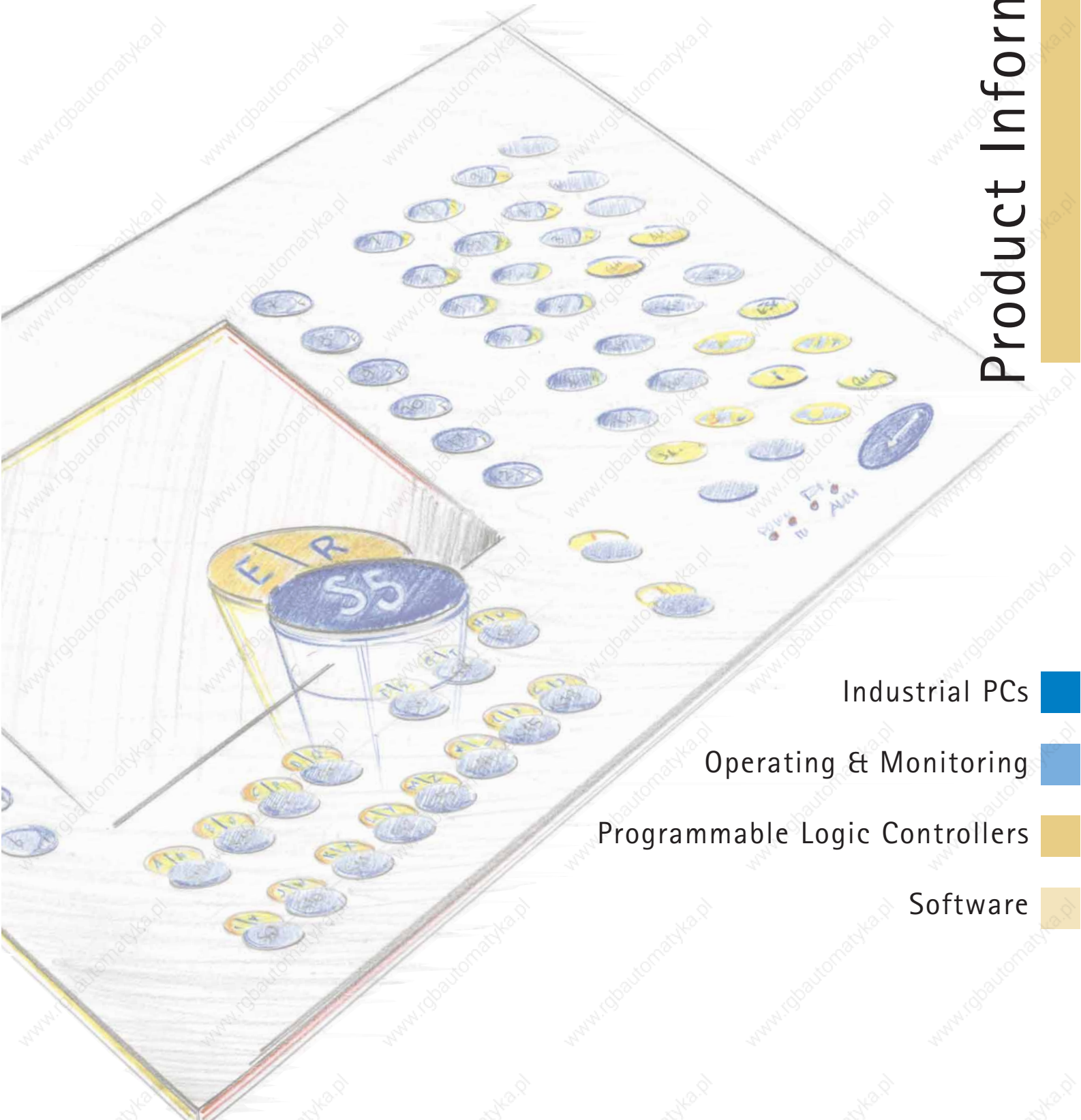
# WÖHRLE

Automatisierungs-Elektronik

2000

2001

## Product Information



Industrial PCs

Operating & Monitoring

Programmable Logic Controllers

Software

## Innovative Automation

Your Subject is the Automation.

You contribute to realize decisive progresses in the productivity.

You apply technical procedures precisely tailored to the respective task that fulfill every quality requirement based on their future-oriented development and production. That's why you expect a responsible service.

Facing this background it is good to count on a partner that is competent, innovative, cooperative, reliable and that knows the automation market for years: the Wöhrlé company.

Our world is all the automation technology. You do not only find a comprehensive selection of sophisticated technological products and intelligent systems. In close contact with you we also give our advice and assistance for your automation concepts.

We attach great importance to place our services within easy reach of the customer. Also as far as the after-sales service is concerned. Thanks to our support-hotline our skilled and continuously trained staff reply to your questions on request. And this of course not only by phone but also at site.

Trust in us.

Finally we want you to be satisfied.

## Industrial PC systems

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LCD/CRT PC systems



IPC Rack systems



Snap On PC



Customized solutions



# Operating & Monitoring

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Operator Panels



Monitor Operator panels



Text Display Units



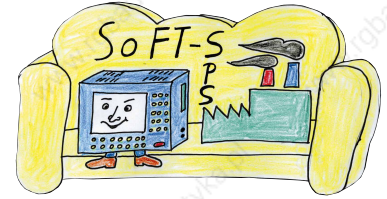
Large Display Units

# SPS-Steuerungen

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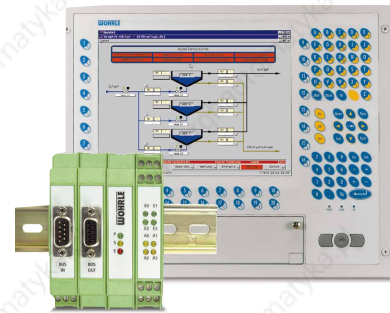


PLC Systems



# Systems

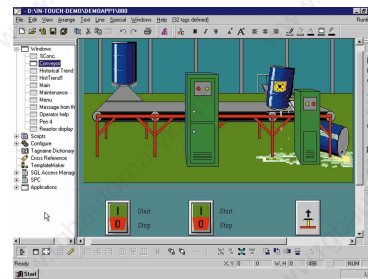
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Decentral and Intelligent

# Software

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Visualization and Control

Summary

## DICO and CIMO industrial PC systems

Are you on the look-out for the range of industrial PCs that exactly meets your needs? That provides top performance and flexibility? That will cope today with tomorrow's ever-more complex manufacturing and production processes? That works smoothly round the clock? Even in harsh mechanical, hot, and chemical environments?

Here's the answer: DICO and CIMO, the IPC range from Wöhrlé that meets every requirement of professionalism, quality, and reliability. Giving top performance, flexibility in a compact version, and with a long service life, the new DICO and CIMO computer generation wins hands down- even in the harshest of industrial environments.

The new and appealing design was developed in line with today's ergonomic scientific knowledge. So the IPCs are easy and practical to operate.

We are also happy to meet special requirements: from specially adapted front panels, specific configurations, through to tailored engineering.

### The important features at a glance

- Runs under DOS, Windows 95, Windows 98, Windows NT and Windows 2000.
- Robust structure suitable for industrial use making use of slot CPUs with Watchdog Timer; AMD K6 to Intel Pentium III CPUs.
- Self-contained enclosures, no need for rail-mounting.
- Vibration-absorbing disc drive bearing arrangements
- Optimum ease of operation using new, clear keys with specially developed ErgoButtons.
- Easy-to-replace touch-screen operator control panel at the front.
- Front protected to IP 65, i.e. impermeable to water spray, dust, grease, oil.
- Temperature control as standard
- Automation and project software to meet every requirement.

## DICO industrial PC systems

The DICO range of industrial PCs has proved itself in particularly harsh industrial environments. These 19" technology computers continue to work happily where others give up.

DICO IPCs are compact, modular systems. Powerful slot CPUs ensure fast working speeds. Thanks to the optional analogue-resistive hard surface Touch-Screen technology that can be operated while wearing gloves it will function even if the membrane is broken. The front panel is coated in powdered plastic laminate which is particularly environmentally friendly. This protects the computer from aggressive chemicals - and also avoids special waste.

The scratched filter plates and damaged keyboards that are part of the daily harshness of industrial operations are no problem for our DICO system. They can be replaced in a few minutes in just a few manoeuvres - thanks to the double wall technology - without having to dismantle the whole unit.



## CIMO Industrial PC systems

Particularly compact, particularly slim, and very powerful - these are the features of our LCD/TFT flat-panel screen CIMO IPCs that keep pace with advanced DICO technology in every way.

CIMO computers are equipped with everything a fully developed industrial PC needs: slot CPU, temperature monitoring, freely programmable configuration of the integral front-mounted keyboard, diskette, CD drives and a great deal more.

The TFT back-lighting is extremely well ventilated. This increases the equipment's service life. If the lamp needs changing, it can be done manually through the front panel flap without dismantling the whole device.

For those who prefer to work with the mouse rather than from a keyboard, we can also supply these in a version up to protection type IP 65.



## IPC Rack systems

Robust design, flexible modular expansion options, good access - our rack system intended for use in operating desks or control cabinets is exemplary in the way it meets every requirement.

The DSR4 is a 4HU 19" technology rack computer. The enclosure is made of high-quality stainless steel. The separate card rack which enables the computer section to be easily pulled out is particularly user-friendly. It makes it very easy to reach all the components.

The IAC-C800 is it's lowcost brother.

The backplane corresponds to PICMG standard. This allows combined operation of ISA and PCI cards.

A selection of different monitors and LCDs is available to provide clear and legible data display.



## Snap On PC – SR-Nova

The "SR-Nova" is the ideal computer for the standard control cabinet. Thanks to the particularly compact version the same integrates unproblematically into the range of the other components such as contactors, relays and fuses.

**Snap-on, plug-in and go.**

## Low-cost version

Many control, regulating, and visualisation tasks are best performed by small systems. We have suitable options here.

- ICAT-MIDI with 8-slot passive backplane or standard motherboard

And of course we will also equip these devices to your particular requirements. Because at Wöhrl we meet every need.

## Wide range of accessories

To complete your system we offer a wide selection of accessories:

- keyboard and printer drawers in 19" technology for control cabinets up to protection type IP 65.
- Membrane key-boards in 19"-technology for control cabinets up to protection type IP 65.
- Extension keyboard cables - up to 500 metres in length.
- Various monitors and monitor operator control panels
- Various LC displays
- Dummy plates and sealing rails
- Various fieldbus interfaces available



## Fully Customized Solutions

Tailor-made IPC-solutions from Wöhrlé: plenty of variations in design and technics now open new application possibilities.

Not all tasks can be solved with standard series. Therefore the Wöhrlé company offers special solutions for special requirements.

In this way the IPC-enclosures are adapted in form and dimensions to the - partially very difficult - mounting arrangements. At request the components can also be integrated in several enclosures. No limits are set to the variety.

The demand-oriented supply of the front plate takes into account the technical and design aspects, of course. We meet every requirement regarding the size, form, colour, the company's logo, description etc.

Even the keyboards can be made quite individually according to functional and ergonomic aspects. The quantity, arrangement, functions and descriptions of the keys are selectable freely. That's how the industrial PC exactly conforms to the operator's conditions and the user precisely obtains that what really is needed. Not more or less.

Are you interested in our products? Why not contact us immediately? We're looking forward to hearing from you!



### Our user-specific equipment and standard products you will find at:

DAIMLER CHRYSLER  
BMW  
AUDI  
VW  
OPEL  
VOLVO  
HAAS LASER  
SIEMENS  
FOCKE  
WAFIOS  
ELTROMAT  
BARMAG  
MANNESMANN

MÜLLER WEINGARTEN  
SUCHARD  
RITTER SPORT  
MTU  
ZF  
BOSCH  
DÜRR  
SCHULER  
FISCHERWERKE  
KÄRCHER  
DYNACAST  
THYSSEN  
DORNIER

FICHEL & SACHS  
BABCOCK  
ABB  
BÜRKLE  
VARTA  
HURTH  
HOSTEIN & KAPPERT  
DEMAG TECHNIKA  
DEGUSSA  
HELDELE  
RASTER  
RHEINELEKTRA  
WINKLER & DÜNNEBIER

WITZIG & FRANK  
KUKA  
STEINECKER  
LASCO  
KRUPP  
SAIA  
FIAT  
MÜLLER MARTINI  
ROSENTHAL  
MICHELIN  
MAG  
...

Industrial-PCs

## MEDIO operator panels

The well-developed MEDIO range of operator panels made by Wöhrlé are ideal for use where you need more than just a straightforward display.

With its clear line display and wide-ranging yet extremely intelligible MEDIO functions the operator has the machine and its functions under control at all times.

Even from very remote positions. And the familiarisation period is minimal.

A clear program structure, self-explanatory key words and almost any combination of commands configurable by the user mean that the complex functions of the PLC can be transferred to the HMI range.

**And naturally Wöhrlé engineers are always thinking ahead:**

- An additional keyboard can be added to enable even more functions;
- No less than 250 subsidiary displays can be connected if displayed messages are required simultaneously at a number of different locations.



## DICO monitor operator panels

Monitors and monitor operator panels in the DICO range of products by Wöhrlé are the best choice for use in fully automated production plants. They are user-friendly, efficient, and are independent of the control system. This range of equipment enables you to monitor and control even complicated processes very simply and very clearly. The keyboard layouts correspond to the visualisation system used, and the keyboard configuration is also freely configurable.

The special feature of all DICO devices is that they are so easy to service. If necessary filter plates or keyboard components can be changed in seconds without the need for dismantling the equipment. Wöhrlé's double wall technology makes it possible. Nonetheless, these monitors and monitor operator panels are protected from the front to IP 65.





## CIMO - monitor operator panels

There is a wide range of CIMO monitor operator panels to suit every task and every budget.

### CIMO monitor operator panel with LCD "TFT display"

Extremely slim design, outstanding colour brilliance, excellent reading angle, front panel membrane-protected against chemicals, new ergonomic design - just a few of the impressive features of this top product from Wöhrlle.

### CIMO operator panel with Windows CE - the latest generation

This particularly high-quality range is the result of the latest Wöhrlle development and closes the gap between text-oriented computer terminals and traditional industrial PCs. The operating system is Microsoft Windows CE. This means that it is possible to operate all standard applications and utilise the advantages of this platform, such as the Internet facility.

TFT LC displays are provided for the operating panels of the future, providing high resolution and excellent colour.

These ultra-compact operator panels are setting the standard.

### CIMO operator panel is the economical version

An easy-to-use membrane keyboard and a graphic black and white LC display make sure that control and monitoring is cost-effective. A particularly economical solution.

### CIMO monitor operator panel with CRT

This range of equipment with monochrome cathode ray tubes provides the most innovative and economical solutions in the field of operating and monitoring plant and machinery. Protected at the front to IP 65 they also withstand harsh environments.



Operating & Monitoring

## ANKA® Display systems

ANKA® displays by Wöhrlé are your indispensable aid to communications. They provide information, help, warnings and support. Several language levels within one device mean that your information system is international.

The display systems are easily coupled to the PLC or PC either serially, or via fieldbus.

We supply drivers for a large number of control systems with every display unit.

They are particularly cost-effective in that up to 250 subsidiary displays can be operated from one display unit. It is also possible to form terminal systems. And up to 15 groups each with up to 15 large displays can be controlled from one serial port. So there is no limit to the opportunities for combination.

## ANKA® text display units

ANKA® text display units by Wöhrlé are used to increase the availability of automatic processes. The choice of equipment is huge. From straightforward text monitors to the most advanced systems. Display unit designs range from 2 x 20 characters to 4 x 40 characters.

ANKA® text display units with keyboard also enable reactions from the operator to be entered, as well as event reporting.

## Wide range of accessories

To complete your system we offer a wide selection of accessories:

- various fieldbus-Interfaces available
- Programming Software

## Keyboard modules

The various input options for Wöhrlé operator panels can be expanded by adding keyboard modules with 16, 20, or 24 keys, together with LED display units. They are the ideal data input devices for PLC-controlled machinery. With them you are equipped for every control task.

In addition to this our keyboard modules are also designed for stand-alone use, they are connected through the Profibus.



## ANKA® large display units

At airports and car-parks, production lines and inside buildings, ANKA® large displays by Wöhrlé are essential everywhere for rapid and direct information. Not only do they display text and figures in sizes configurable by the user. Icons and graphics can be displayed clearly, and in many colours too, thanks to the dot matrix LED displays. This considerably increases the attention-getting value.

ANKA® large display units are housed in solid enclosures of protection type IP 65.

The modular and flexible system design provides a number of different expansion options:

- LED large displays, single colour (red, green, yellow, or mixed configuration)
- character height 50 mm, up to 15 lines, up to 40 characters per line.
- LED large display units, multi-colour (red, green, orange). Character heights can be altered:
  - at 120 mm character height : one line display 3-20 characters per line
  - at 50 mm character height these values are doubled.

## DMS Large-Scale Displays

Nearly all what a PC screen shows can just be represented with the new large-scale display system DMS.

The system is based on individual modules equipped with three-coloured LEDs that are lined up in horizontal and vertical direction. That's the way display panels of any size can be produced for very different tasks to provide information for the quality control, the production status or the process visualization. It goes without saying that these displays can also be used for the representation of messages in the public such as for instance at airports or vast parking areas. It's because of their solid aluminium enclosure that they are weatherproof as well.

The representation of the displays does not only concern texts and numbers but the DMS system shows pictographs, logos and graphics of all sizes. The representations are created on a PC.

As an option these large scale displays can be provided with multicolour technology mixing 256 colours out of red, green and yellow. These types are called **DMS-MC**.

A new product is the **PD 42** a 42" (106 cm) Plasma display with a full colour technologie and a resolution of 852 x 480 pixels. This display is ideal for process visualization, Control room, management- and visitor-information etc.



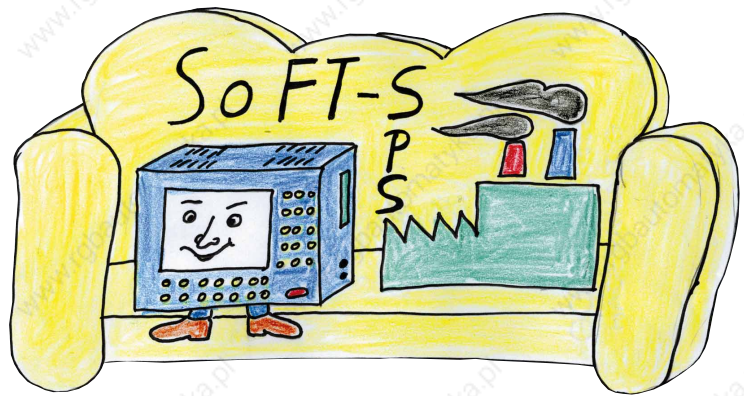
## iCon - Intelligent Control System

Nowadays the economic operation, observation and control is top priority - the features of **iCon**. This new, trade neutral PC-based guidance system with field bus conjunction is a successful synthesis of reliable hardware with possible connectivity to external peripherals, high-performance sequence control **iCon-PLC** as soft-SPC and a comfortable visualization **iCon-Vis**. So as to avoid any problems with the interfaces Wöhrl supplies all as a perfect whole.

The software module **iCon-Vis** is just the solution to keep track with complex systems. You can be sure that the price/performance ratio will meet all needs. **iCon-Vis** offers all functions that are state-of-the-art today and a great deal more. Those who need to work in other languages can switch over online. The great advantage are the transparent data starting from the field bus further to the guidance system up to the commercial department.

The software package **iCon-PLC** from Wöhrl is an innovative control solution and as PC-based soft-SPC a particularly cost-effective alternative to the classical SPC. This makes it very easy to develop, test and realize control solutions. The programming in step 5, step 7 or IEC 61131-3 is particularly user-friendly. But that's not all. Thanks to the integrated open standard interfaces the communication is free to operate with other visualization programs, soft-SPC and various software tools.

By the way: All the advantages of the software packages **iCon-Vis** and **iCon-PLC** can also be used separately or linked with other software packages by means of OPC driver.



## PLC 102 compact control system

Not every compact control system has earned the name, but this is not true for the PLC 102 from Wöhrl.

Looked at closely the device consists of two units inside one enclosure: the PLC and an operator control panel with graphics-enabled LCD. Both systems operate from their own 32-bit processors. This ensures absolute system integrity. A very fast and straightforward interface connects the processors to one another.

The **PLC 102** belongs to the new generation of control systems and is perfectly designated for straightforward to medium-difficulty automation and monitoring tasks. Just right if you expect high performance at the lowest price.

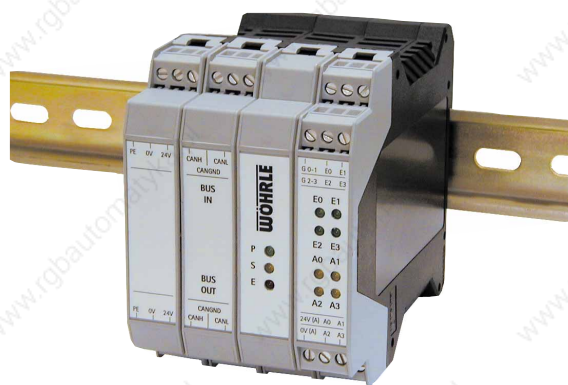


# diCon - Decentralized Intelligent Controlling

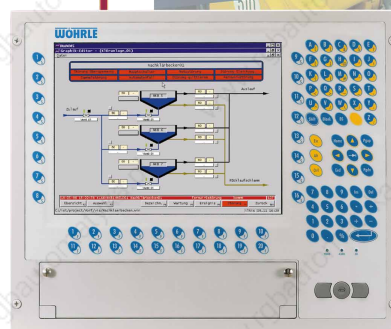
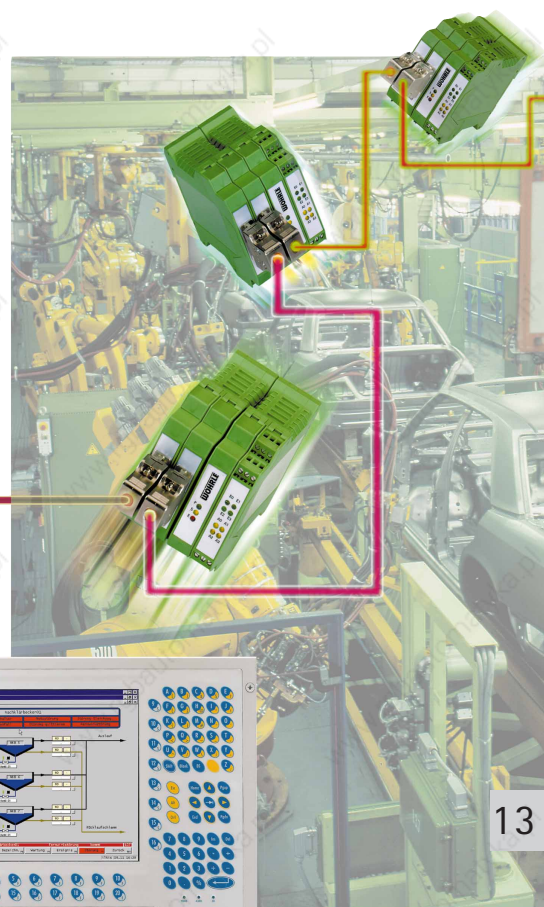
Decentralization means to control where the necessity exists to control. In other words direct links are allowed between the individual isolated controllers. All the same it must be possible regardless of distributed isolated controllers to centrally produce and supervise the operational sequence functions. Also service and maintenance interventions must be centrally feasible to enable an uniform remote maintenance. Finally it applies to avoid communication losses and have operation functions worked out by those who know the process best and to have the documentation always updated and at central disposal without paper. Now there is a solution that satisfies these requirements. The new decentralized automation system "diCon" from Wöhrl.

Main part of the new system is a comprehensive modular automation software. The software runs on an industrial PC that is integrated best in central place to the decentralized automation system. Starting from the configuration the IPC can be simply equipped compared with others since the actual process functions are realized within the distributed intelligent nodes (diNo). The nodes are made of a computer unit, a communication section as field bus interface and an input-output unit. The field bus connection between the intelligent nodes and the industrial PC is worked out for multimaster purposes. This is why the individual nodes are able to communicate with each other and the industrial PC.

During current operation only the functions - visualization, diagnostic analysis, after-sales service and if requested even the remote maintenance are left to the industrial PC. If the user wanted to do without these functions the IPC could be uncoupled from the network since the network of the intelligent nodes operates independently. But at permanent connection of the industrial PC to the network, the automation system can be involved to the internet or intranet by use of the IPC. In this way a composition of automation systems can be realized between one or even several factories and enable a throughout remote maintenance service.



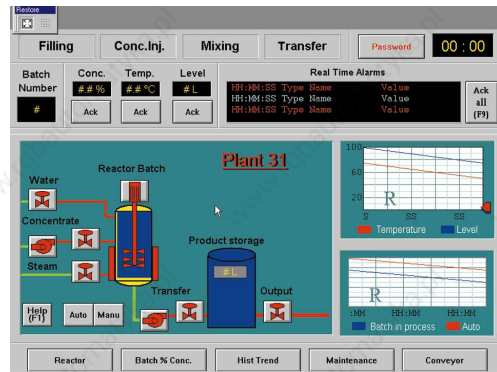
Systeme



## InTouch™ process visualization

It's good to have the right hardware. But it's even better to have the right software to run on it! For this reason Wöhrle, in conjunction with Wonderware, the world's leading supplier of software for industrial automation systems is now offering extremely efficient program packages. For example InTouch™, the leading visualization system running under Windows.

This easy-to-use software is an object-oriented 32-bit development tool for human-machine-interfaces (HMI). This means that engineers, production supervisors and managers are able to observe complex procedures on the computer in the form of graphic representations of real-time processes. The special feature of InTouch™ is the abundance of easy-to-understand information management functions.



## InControl™ PC control system

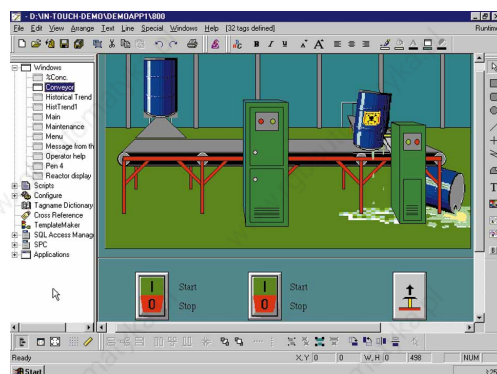
InControl™ by Wonderware is an integral control solution replacing traditional programmable logic controllers with a soft PLC, a PC-based solution using open architecture. This real-time control system running under Windows NT is a cost-effective alternative to the PLC. With InControl™ it is very easy to draft, test, and implement solutions for machine and process control systems. International standards including the IEC 61131-3 programming language make the work easier. And of course it incorporates integral standard interfaces, powerful process logic and is very easy to expand.



## FactorySuite 2000™

InTouch™ and InControl™ are integral components of the successful FactorySuite 2000™ software package from specialists Wonderware - for successful production management.

We are happy to bundle other main components of this software package onto your Wöhrle equipment. For example "Scout", the reliable Internet/Intranet tool for local monitoring stations.



All you have to do is discuss it with us.