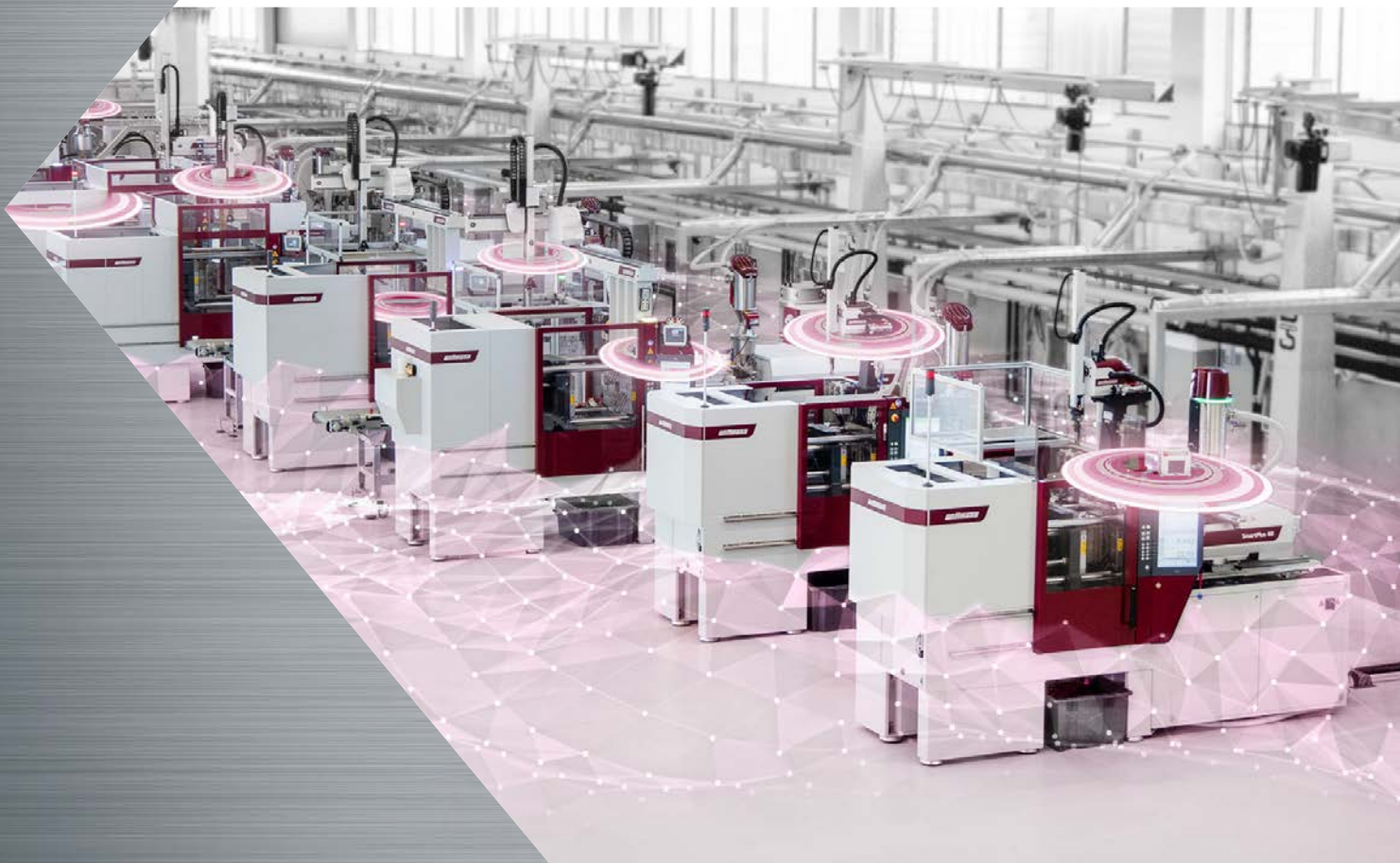


Wittmann

Innovative solutions for your success

Digital technologies from WITTMANN



world of innovation

For more efficiency and profitability

Wittmann 4.0

The degree of digitalization decides about efficiency, quality and competitiveness. Provided the digital solutions fit the company, the specific requirements and the processes.

This is why we at WITTMANN scrutinize your applications thoroughly and recommend solutions which pay off right from the start. Wittmann 4.0 comes with a strictly modular concept. As a user, you will benefit from each individual solution. And the best part: Wittmann 4.0 will continue to grow flexibly with your increasing demands.

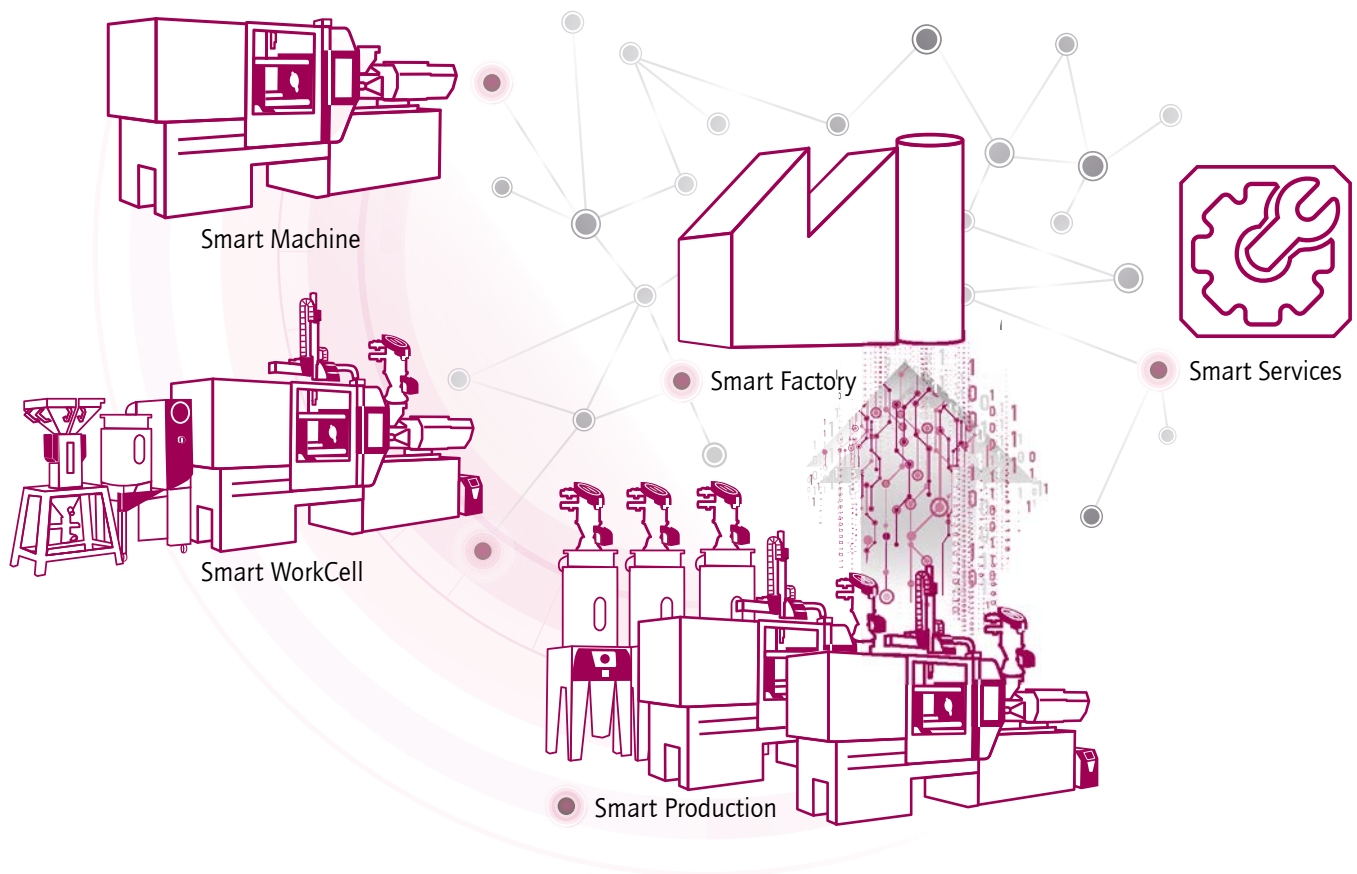
Wittmann 4.0 includes Industry 4.0 technologies for all segments of the Smart Factory: Smart Machine, Smart WorkCell, Smart Production and Smart Service. Digitalization all the way up to using Artificial Intelligence is one of our top development priorities. Wittmann 4.0 will always keep you up to date.

In the Smart Factory, all machines, equipment and applications are integrated in an Internet of Things (IoT) and communicate with each other. This system supports automatic, self-optimizing processes, efficient individualization of workflows, as well as extremely economical management of resources. Continuous, comprehensive data analysis facilitates production planning and calculation of key business figures.

The special benefit of Wittmann 4.0:

We have the entire process in view, including material handling and feeding, as well as injection molding, mold tempering, automation, Inline recycling and integration into higher-level IT systems.

Only WITTMANN can perform this so completely.





Smart Factory

Smart Machine – self-optimizing machine

Digitalization starts on a machine's control level and includes the integration of powerful sensors and actuators. Here, major advantages can already be realized with relatively small investments. For the flexible HiQ and Expert assistance systems from WITTMANN ensure a repeatable, stable injection molding process – even when environmental conditions and material qualities fluctuate. In addition, QuickSetup and SmartEdit accelerate the setup process and assist when specialist staff is not present.

Smart WorkCell – production cell speaks OPC UA

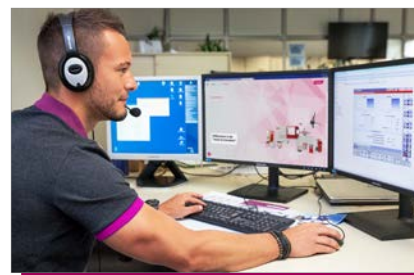
Via standardized interfaces and communication protocols such as OPC UA, all components of the production cell exchange information and coordinate their workflows. The result is maximum overall efficiency. Intelligent networking transforms the injection molding machine's Unilog control system into the central operating unit for the entire production cell. All data from the machine, automation and auxiliaries are stored in one place – for complete traceability and efficient Plug & Produce.

Smart Production – keeping an eye on the entire machine park

With its MES specially developed for the injection molding industry, the WITTMANN Group has taken another step further towards integration. TEMI+ enables intuitive networking across the entire production equipment plus integration of adjacent corporate departments such as logistics and procurement. The collected data enables real-time monitoring of production processes, efficient planning of capacities and resources, and comprehensive analysis of production data. Optionally, the data can be synchronized directly with the ERP system. In this way, TEMI+ ensures transparency and delivers relevant business KPIs.

Smart Services – for maximum availability of machinery

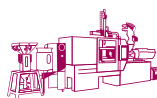
About 70% of all service requests can be solved by remote access within a very short time. This is how WITTMANN Web-Service 24/7 combined with remote control provides maximum efficiency. Status-based, preventive maintenance will also increase the availability of your production equipment. With AIM4Help, WITTMANN already exploits the full potential of artificial intelligence for its customers. The knowledge-based system of expertise accelerates troubleshooting.



Smart Factory
Wittmann 4.0



Smart Machine
Control system
QuickSetup
SmartEdit
Assistance systems
Automation



Smart WorkCell
OPC UA / Cybersecurity
Plug & Produce
Digital mold data sheet
One-Screen solution



Smart Production
TEMI+
iMAGoxT

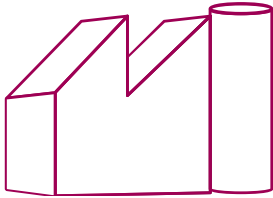


Smart Services
WiQuickLook 4.0
Online help
AIM4Help
Web service
Health Factor

Wittmann

With Wittmann 4.0 well prepared for the future

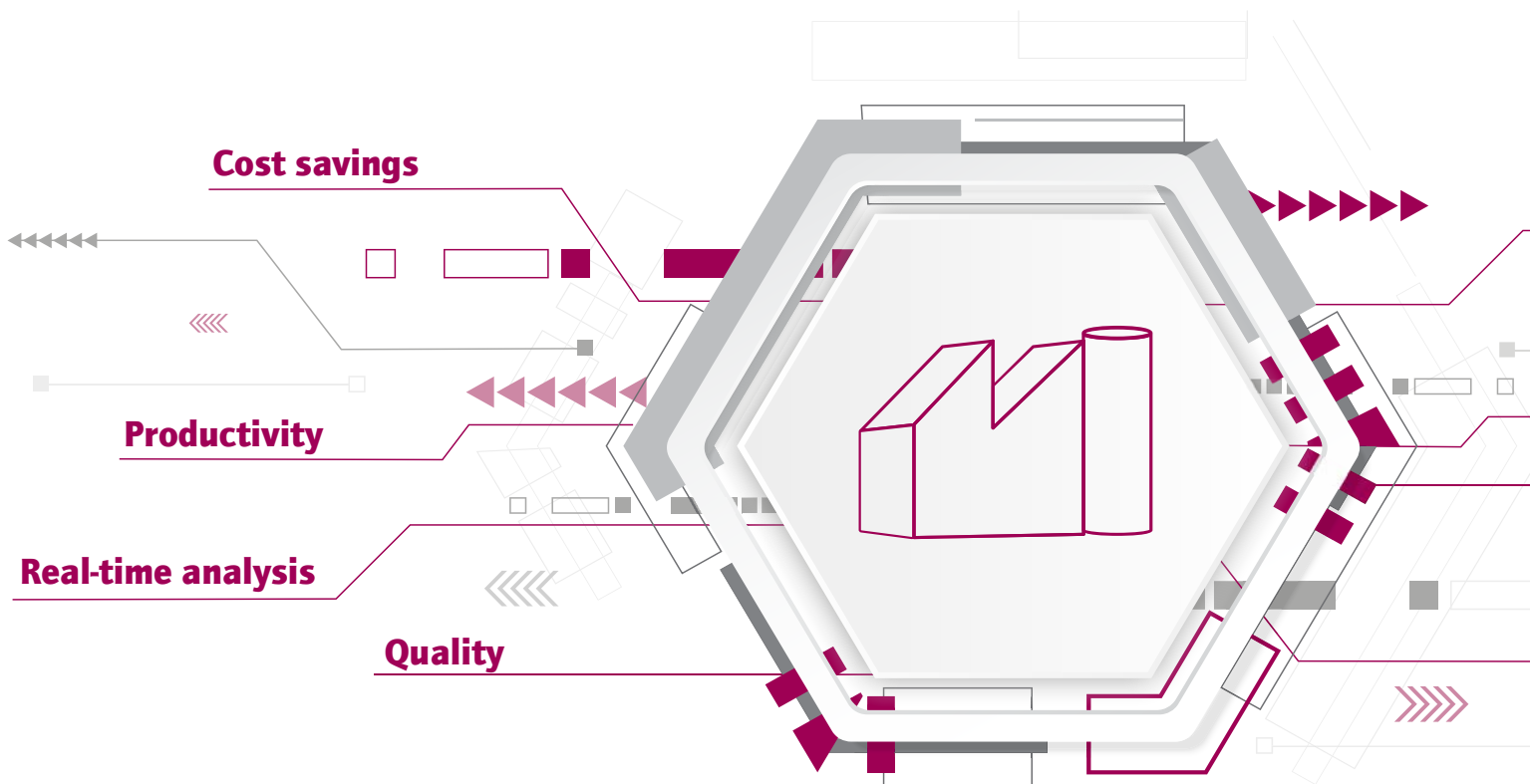
Smart Factory – Digital transformation

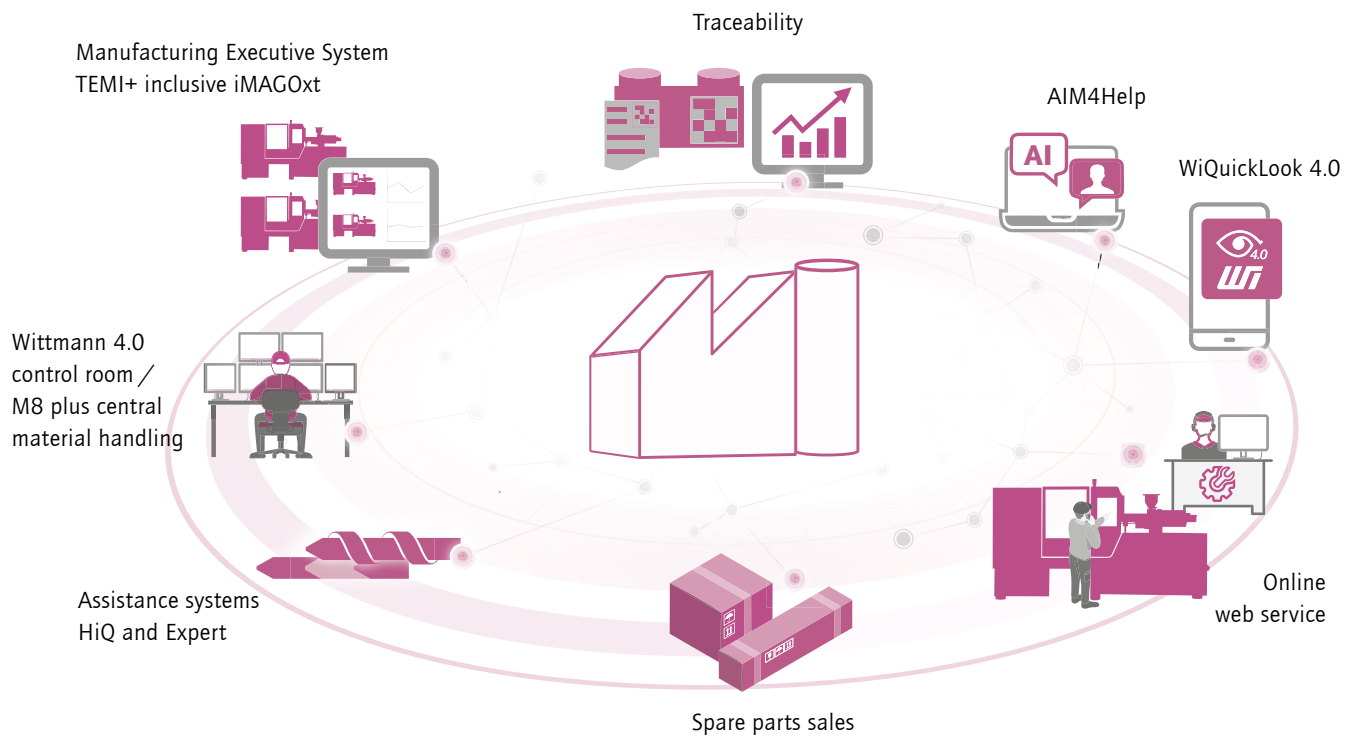


Complete integration, continuous data analysis, self-optimizing processes: the Smart Factory is the goal. The modular approach of Wittmann 4.0 paves the way for more productivity and higher overall efficiency of the equipment.

Your advantages

- More flexibility, for the production can be adjusted quickly and easily at any time to demands which change at short notice
- Extremely high transparency across all areas of production for future-oriented planning and complete control
- Real-time analysis for faster response at need
- Shorter cycle times through faster detection and more effective exploitation of optimization potentials
- Efficiency of resources, as the optimized processes consume less raw material and energy, and pro-actively prevent scrap
- A consistently high quality standard due to continuous real-time monitoring and adaptive systems
- Lower unit costs and higher competitiveness





Smart Factory – the ideal status of an intelligent factory

**Reduction
of cycle times**

Flexibility

Resource efficiency

Transparency

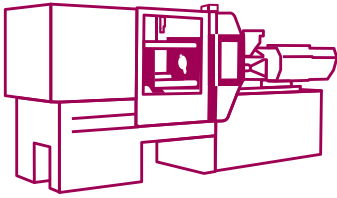
Digitalization projects come just as individually designed as the layout of a production cell.

Wittmann 4.0 does not always require the complete package. Partial solutions can already improve efficiency and quality standards and ensure a relaxed production flow. From materials handling and feeding all the way to injection molding, mold tempering and automation, as well as Inline recycling and integration into higher-level IT systems. WITTMANN is the only company in the injection molding world to offer such a comprehensive range.

Wittmann

The cockpit for the entire production process

Smart Machine – The Unilog machine control system



With Wittmann 4.0, the Unilog control system of the injection molding machine becomes the cockpit for the entire production process. Thanks to OPC UA integration, all pieces of information from the machine, the auxiliaries and the automation equipment come together here.

All process data are made available and saved in real time – for fast, real-time viewing, tracing of process data and long-term process optimization.

clear – intuitive – complete

- One-screen solution, a clear display of integrated WITTMANN auxiliaries
- Joint storage of data from the machine, auxiliaries and automation for efficiency-optimized processes
- Real-time overview of process data and deviations
- Intuitive operation – for safe process control even when specialist staff are scarce
- Comprehensive documentation for seamless traceability
- Smart assistance systems automatically compensate process fluctuations – for consistent, high parts quality



Continuous process data analysis
for efficient decision-making in
sampling, start-up and troubleshooting

Real-time data across the entire production process
recognizing any optimizing potentials at the push of a button

User-defined OPC UA variables
to provide any desired actual and/or target values in
addition to those available from a EUROMAP 77 interface

Actual value graph in csv format
automatically saved directly on USB port or in the network



The Highlights

QuickSetup – Initial setting under control

Just select material data, enter mold dimensions, and off you go. With QuickSetup, setting the machine becomes child's play. Setup times are shortened significantly.

SmartEdit – Sequence Programming

The icon-based system provides ample flexibility and security in cycle sequence programming. Even complex core pull, ejector and air valve actions take up hardly any additional time.

Smart assistance systems – Expert packages

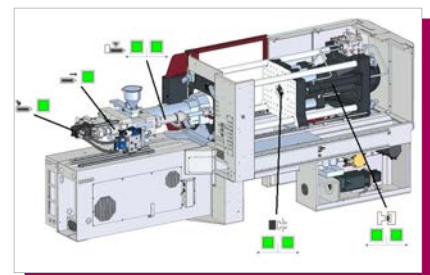
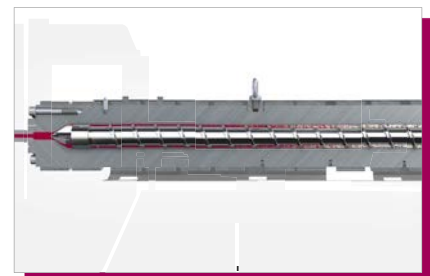
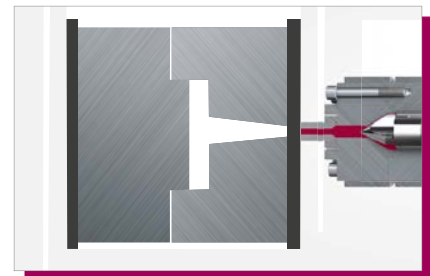
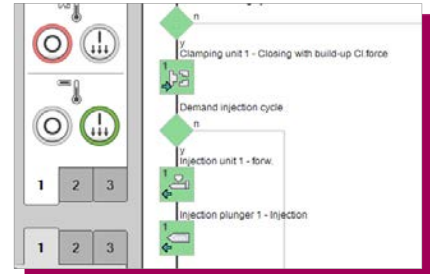
The adaptive assistance systems from WITTMANN ensure a repeatable, stable injection molding process. Expert stands for the software solutions playing out their performance on the clamping side.

Smart assistance systems – HiQ packages

The adaptive HiQ packages help with setting process parameters and keep the production process stable. With the HiQ software packages, you will optimize the injection process.

Health Factor – Machine, how are you today?

The health factor provides information about the "health status" of servo-hydraulic axes and pumps. If the key figure shows any abnormalities, signs of wear or unfavorable operating conditions can be detected early, before any scrap production or an unplanned machine standstill occur.



OPTION HIGHLIGHTS

Stable processes, transparency and easy operation pave the way to more efficiency, sustainability and higher competitiveness.

Wittmann

Comfortable – Safe – Fast

Smart Machine – Software-assisted operation

Initial setting under control

QuickSetup

Speed is vital, since the setup time has a direct effect on unit costs. This is why injection molding machines from the WITTMANN Group take many work steps off the machine setter's hands. Following selection of the material data from the integrated database and entry of the mold dimensions, QuickSetup automatically calculates the optimal parameter settings to be taken over directly for production startup.

Your advantages

- Higher safety by reducing the risk of input errors
- Efficiency-optimized process, since QuickSetup benefits from WITTMANN's long-term experience
- Easy cycle optimization and fast troubleshooting thanks to the help library in the background
- Available mobile as well – with the WiAssist app

The screenshot displays the WITTMANN QuickSetup software interface. The top status bar indicates 'Operating mode: automatic' and 'User level 20 10:15:24'. The left sidebar contains icons for various machine components: Clamping unit (10.2 mm), Ejector (0.8 mm), Injection unit A (-2.0 mm), Inject plunger A (258.8 mm), Injection + HP (0.50s, 2.00s), Mould table (0.00 grad), and 008.A: Filling time (0.53). It also shows 'Total energy' with 'Cycle' at 543.1300h and 'Hour' at 62.37600h. The main area is divided into two sections: 'Machine general' and 'Molding data'. The 'Machine general' section lists parameters like max. Mould temperature (110 C), Demoulding temperature (150 C), aeff (0.090 mm2/s), Solidification temperature (175 C), Back pressure (80 bar), max. Peripheral screw speed (0.40 m/s), Barrel temperature (240 C), min. Barrel temperature (220 C), max. Barrel temperature (250 C), and Cooling temperature (40 C). Below this is a 'Change/Edit material data' section with a 'go to Load/Save material data' button. The 'Molding data' section is for 'Material Polyamide 11 with glasfiber' and includes parameters like Shot weight (395.00 g), Average wall thickness (4.0 mm), Maximum wall thickness (9.0 mm), Flow length (180.0 mm), Velocity Clamping unit + ejector of max. (65 %), Proj. Area (350.0 cm2), Mould height (550.0 mm), Opening pos. (750.0 mm), Open slowly (90.0 mm), Mould safety device Travel (120.0 mm), Injection unit backward stroke (5.0 mm), Ejector forward stroke (160.0 mm), Barrel temperature Selection (220-250C) (240 C), Mould temperature (90-110C) (95 C), and Ejection temperature (150C) (140 C). A 'Calculate Setting proposal' button is at the bottom of this section, with a message 'Inputs were changed. Start a new calculation.' The bottom of the interface features a navigation bar with tabs: General, Adjustment, Zeroing, Calibration, Drive, Safety, and Quick Setup (which is active). Below the tabs is a 'MENU' button and a row of icons for various functions.

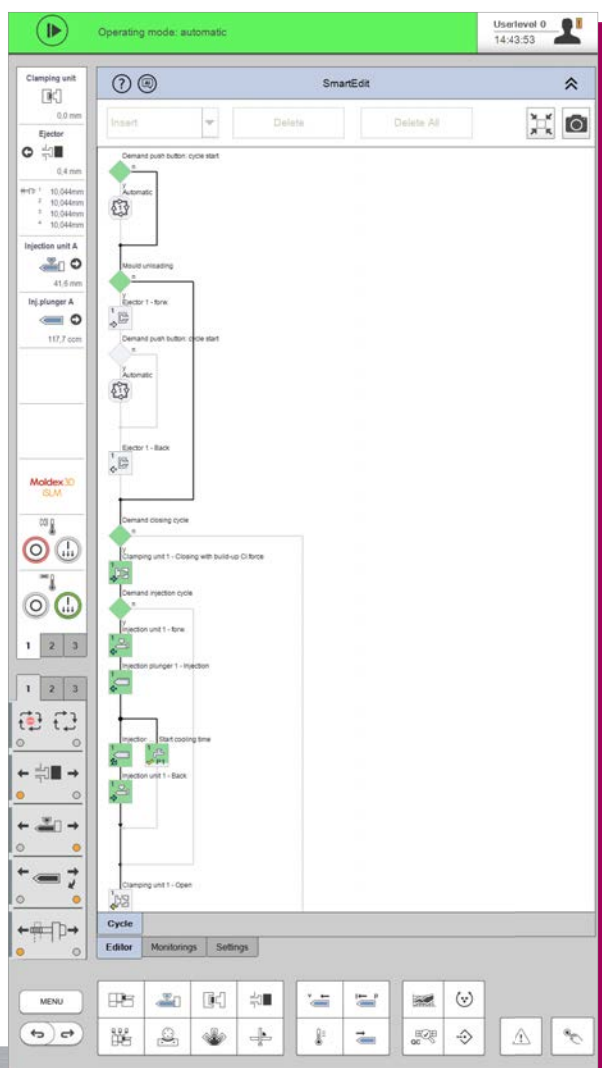
The process sequence at a glance

SmartEdit

SmartEdit assists machine setters with programming special movement sequences in addition to normal parameter settings. Select the icon from the menu and compile the entire sequence with drag & drop and finger touch. There is no easier way to program special functions, for instance for core pulls or air valves.

Your advantages

- Machine cycle can be visualized either vertically or horizontally, as desired
- Clear sequence of events with node diagram
- Changes without consequences thanks to "dry test"
- Theoretical sequences are quickly transferable into real operation



Expert Packages

Clamping force adjustment

Optimized clamping force setting
Monitoring of mold breathing

Expert ClampAdjust

Basic ClampAdjust

Parallel clamping force build-up

Better mold venting
increases efficiency

Expert StepForce

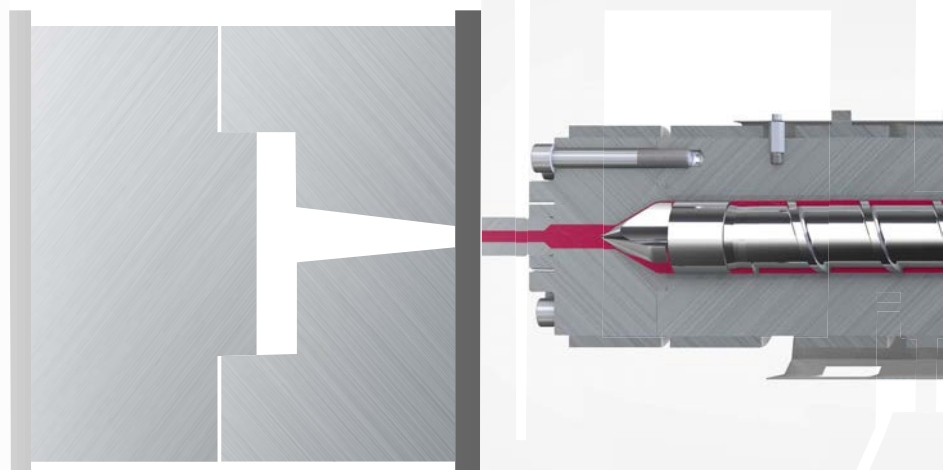
Basic StepForce

Quality monitoring

Analysis of process stability
and detailed data collection

Expert Quality Monitoring

Basic Quality Monitoring



Mold protection

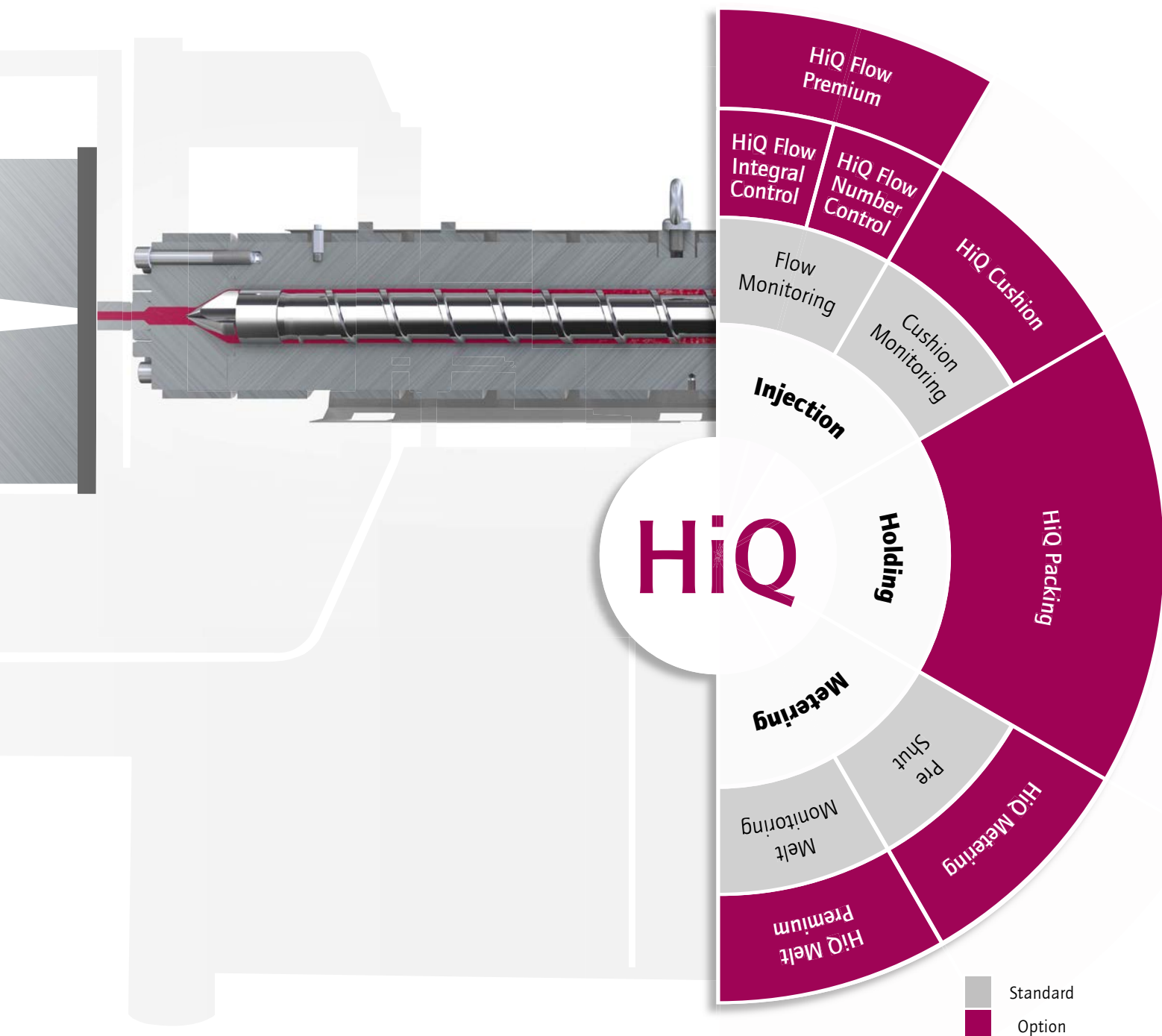
Prevents undesired stops
and protects the mold

Mould Protect

The automatic way to consistently high quality

Smart Machine – Assistance systems and HiQ packages

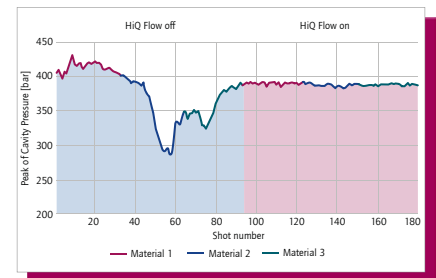
The HiQ packages extend the proven Unilog machine control software “all around plasticizing” by several intelligent functions, which enable autonomous process optimization. These not only provide operators with deeper insights into the ongoing process, but also facilitate handling the machine in daily work. If desired, the HiQ packages intervene automatically in the process – thus ensuring constantly high parts quality even with fluctuating production conditions.



HiQ Flow Premium

(Optional for all machine series, except MicroPower and EcoPower Xpress)

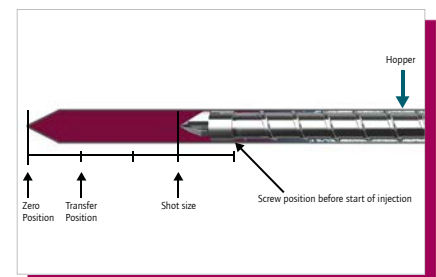
During the injection phase, the software continuously analyzes the viscosity of the melt based on the data collected by flow monitoring. If the measured value deviates from the target value, HiQ Flow Premium readjusts both the changeover point and the holding pressure, all within the same cycle. The result is a consistent part weight in every cycle. In this way, consistently high parts quality is achieved even with fluctuations in the environmental conditions or in the raw material – for example in processing regrind or other recycled materials.



HiQ Cushion

(Optional for all machine series)

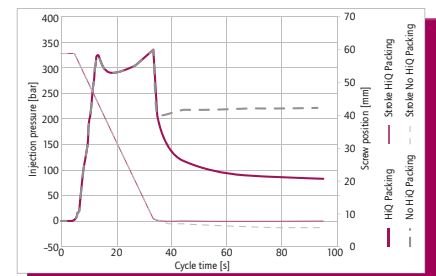
By way of Cushion Monitoring, this software recognizes trends caused by viscosity fluctuations inside the residual melt cushion and adjusts the plasticizing stroke within a defined control range in the following cycle. This ensures production stability.



HiQ Packing

(Optional for all machine series)

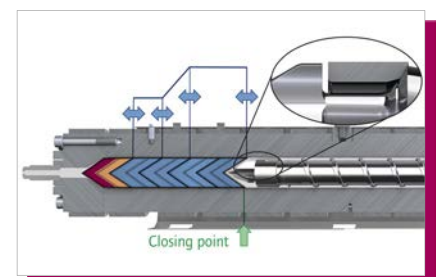
This software enables extremely accurate control of the screw movement at the changeover point and during the holding pressure phase – for balanced pressure distribution and even mold filling. The optimization potential here is particularly high in applications with multi-cavity molds and in powder injection molding.



HiQ Metering

(Optional for all machine series with electric injection units)

With HiQ Metering, the check valve can already be closed firmly before the start of injection by a targeted movement of the screw. Simultaneously, any metering end point deviations are compensated by adjustments of the injection profile and the changeover point, in order to inject precisely the required amount of material in every cycle. The result is excellent constancy of the part weight.



HiQ Melt Premium

(Optional for all machine series)

Here, the focus lies on material quality – for a consistently homogeneous melt. The measured variable is the amount of energy used for plasticizing. It is measured via the screw torque along the plasticizing stroke. In this way, any deviations from the target value can be detected quickly and easily.



Intelligent automation

Smart Machine – Robots

Up to now, WITTMANN has already created successfully thousands of sophisticated automation solutions. In every single case, these have led to the optimization of production processes and improvements in parts quality. Our robots for smart solutions.

Fast and easy SETUP

thanks to the QuickNew wizard. With the R9 TeachBox, the animated program editor visualizes even complex applications very simply and clearly.

Safe and reliable OPERATION

thanks to ACD (Automatic Collision Detection) which prevents collision damage by continuous torque monitoring.

Precise SIMULATION AND PLANNING

thanks to the digital twin. It enables extensive exploitation of optimization potentials – simply and efficiently even before production startup.

Integrated Monitoring of MAINTENANCE INTERVALS

which the robot performs fully automatically, including status-based lubrication systems.

Reduction of ENERGY CONSUMPTION

thanks to EcoVacuum and EcoMode. Through intelligent control, a vacuum is generated only when actually needed. The robot also adjusts its movements to the machine cycle and protects the mechanics for an extra-long service life.

Monitoring in REAL TIME

thanks to the video assistance system (replay), which makes it possible to adjust the process at any time on the basis of real-time data.

Minimal REMOVAL TIME

thanks to SmartRemoval, for the optimized removal curve shortens the removal time and also saves energy.

Seamless COMPLETE INTEGRATION

thanks to high-speed real-time communication, the machine and the robot coordinate their movement sequences time-optimized.



Machine and Robot – an unbeatable team

Fast and reliable communication

All auxiliaries and robots from WITTMANN can be integrated seamlessly into your existing production environment. OPC UA enables fast, safe communication between injection molding machines, robots and auxiliaries. In this way, all components of the production cell coordinate the performance of their tasks. This leads to greater efficiency and productivity.



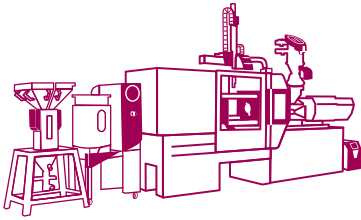
R9 control system with SmartRemoval

R9 – THE ROBOT CONTROL SYSTEM

The TeachBox of the R9 control system scores with a touchscreen and very clear visualization using live 3D animations. For high-precision control of travel movements and for programming, keys with tactile feedback are also available. All robot programs can be exported to USB flash drives or saved on an integrated PC.

The work cell speaks OPC UA

Smart WorkCell – Uniform communication standard



Standardized interfaces are a prerequisite for integrating machines, auxiliaries and automation equipment into a single unit. This is why the WITTMANN Group has taken the lead in developing uniform standards for continuous communication between the individual appliances of a work cell, including integration into an MES system. An important success story: OPC UA has established itself as a globally recognized standard for the exchange of information on industrial production floors.

Your advantages

- **Flexibility and openness:**
OPC UA functions regardless of different equipment brands or programming languages, and it can be upgraded at any time to meet new requirements.
- **Independence of platforms:**
OPC UA is compatible with all operating systems.
- **Security:**
OPC UA offers high security standards with several security levels and mechanisms for authorization and coding in data transfer.



Maximum cyber security on three levels

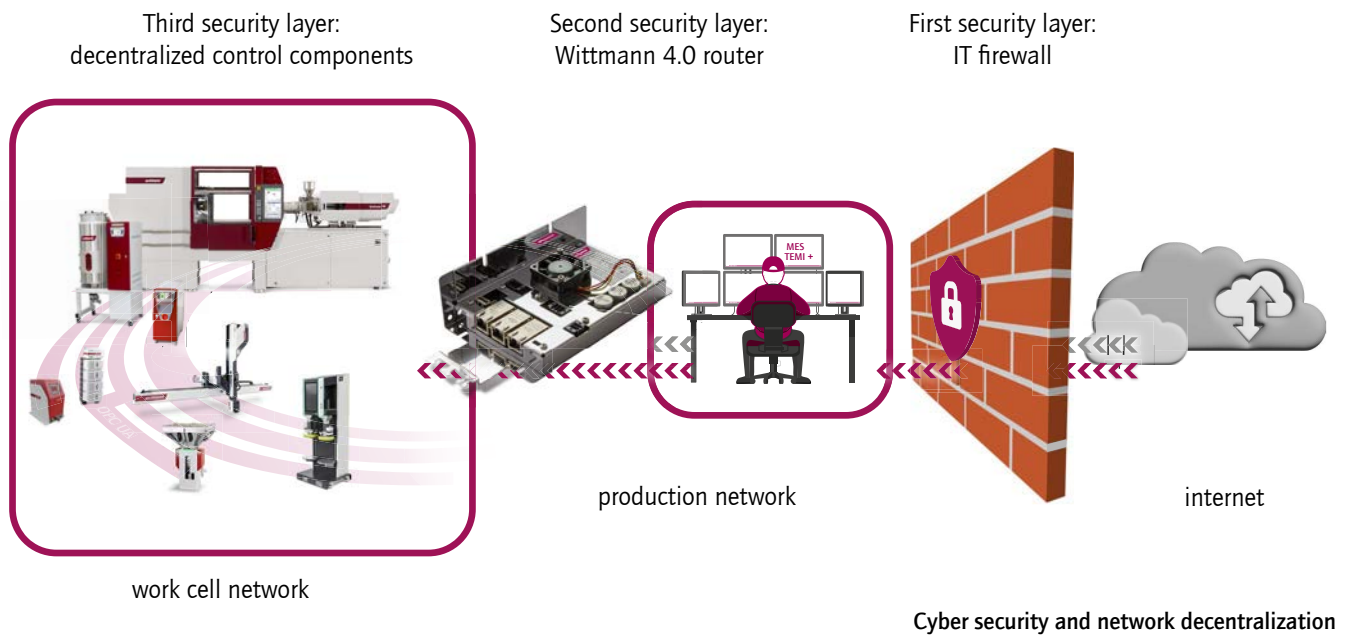
The WITTMANN security concept

WITTMANN relies on a proven security concept. It consists of several security layers protecting the control software against external attacks. Its main objective is uninterrupted, safe production even in the event of a cyberattack hitting the corporate network.

The first level of protection consists of the corporate firewall. Should this basic security barrier be overcome, the Wittmann 4.0 router will take over as a second protective barrier.

With its parameterizable firewall, the router implements several precautionary measures to protect the work cell. The software and all apps bear cryptographic signatures.

The third and innermost safety level consists of the control system components distributed among the WITTMANN appliances. These function with different operating systems and thus impede cyberattacks on the central control core.



With WITTMANN, you are on the safe side

Effective security systems protect your sensitive information, values and assets

Wittmann

Your shortcut to faster production startup

Smart WorkCell – Plug & Produce

Supported production startup made easy

Plug & Produce

A Smart WorkCell stands out by its minimal need for user intervention. This saves a lot of time during mold changes. The Plug & Produce function guides the machine operator in just a few steps to optimal setup and coordination of a work cell. Here, the digital mold data sheet is the essential tool. Plug & Produce

also uses it to increase process reliability. For it reduces the error risk caused by manual input. Already during the second startup, the injection molding machine recognizes the mold and will set the optimal processing parameters automatically.

Your advantages

- All connected auxiliaries are automatically recognized and integrated into the work cell network.
- Automatic plausibility check prevents the connection of incompatible devices.
- Fast, easy setup is also possible during night shifts, even without the presence of specialist staff – for more productivity.



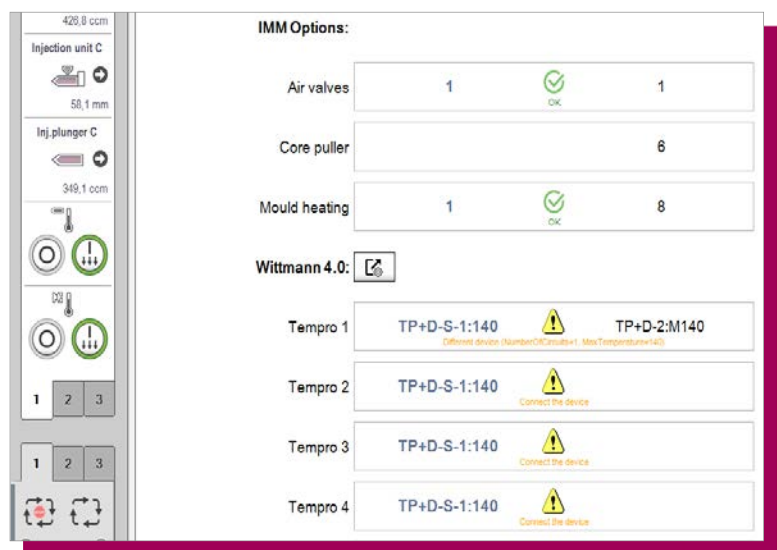
Safe, fast setup

Digital mold data sheet

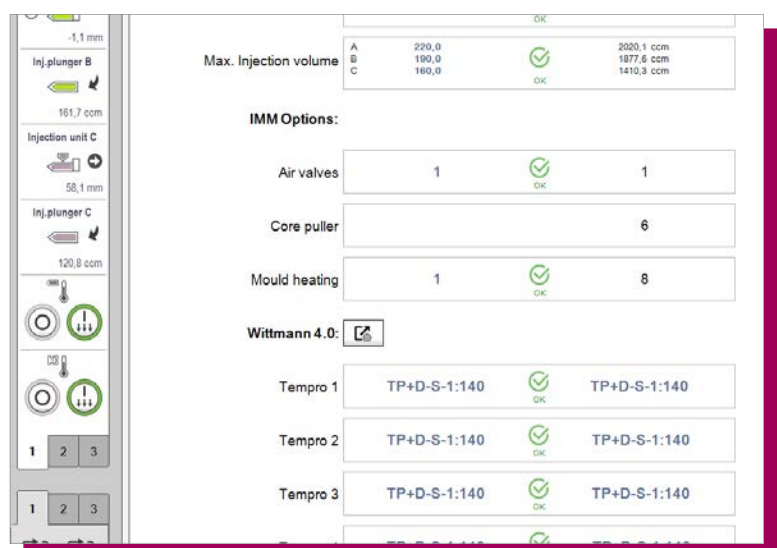
Every mold presents the injection molding machine, the robot and the auxiliaries with very specific requirements. The digital mold data sheet collects all of these requirements and communicates them to the production cell's central control system. This makes it possible to check automatically within seconds whether the appliances involved actually fulfil all requirements of the process.

Your advantages

- The digital mold data sheet enables fast loading of interconnected data sets. The entire work cell is supplied with data by a single click.
- The system checks automatically all important parameters, then carries out a target-actual comparison and shows on the display whether the machine and auxiliaries fulfil all requirements of the production process.
- Thanks to the one-screen solution, the entire work cell can be operated and monitored via the injection molding machine's central control system.



Preview of required connections



Mold data sheet loaded successfully

The entire work cell in view at a glance

Smart WorkCell – One-Screen solution

Keeping all components of a work cell in view can be hard – and requires some stamina. For all control activities are normally carried out directly on the appliance. This means that the machine operator must run back and forth several times between the individual components. Here WITTMANN offers an effective remedy with its one-screen solution. Thanks to Wittmann 4.0 networking, all components of a Smart WorkCell can now

be set and monitored centrally on the machine's display screen – or, alternatively, on the Teachbox of the robot's R9 control system. And when we say all, we mean all without exception, from material loading, injection molding, mold tempering and automation all the way to Inline recycling and integration of the work cell into an MES. Only WITTMANN can accomplish this so completely.



Temperature controller

for effective mold tempering

Airmould/Cellmould

or any other special technology
for efficient quality management

Dryer

for energy-saving material preparation

Unilog

for centralized, efficient
and user-friendly one-screen
process control

MES

for energy-saving
material preparation

Dosing unit

for precise material management

Flow controller

for a smooth, constant process machinery

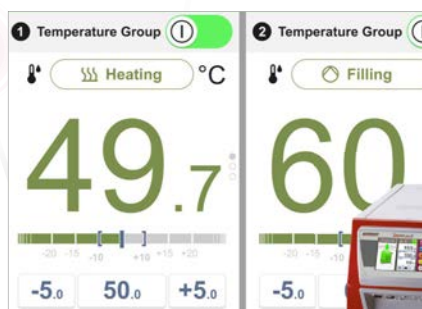
Robot

for fast parts removal

Efficient integration of third-party systems

Web technology for integrating other applications into the control system, such as internal mold pressure sensors or hot runner regulators

Webcam, to keep the opposite side always in view for the operator



Temperature controller



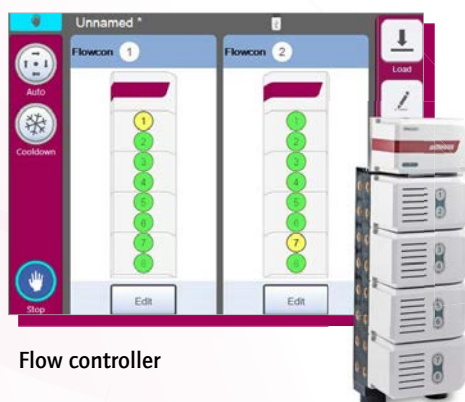
Airmould/Cellmould



Dryer



Dosing unit



Flow controller

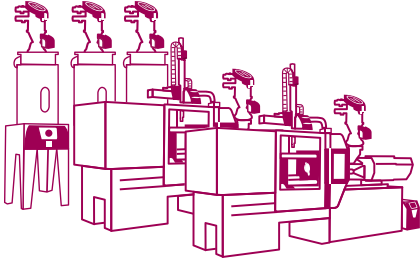


Robot



Transparency for sustainable product development

Smart Production – TEMI+

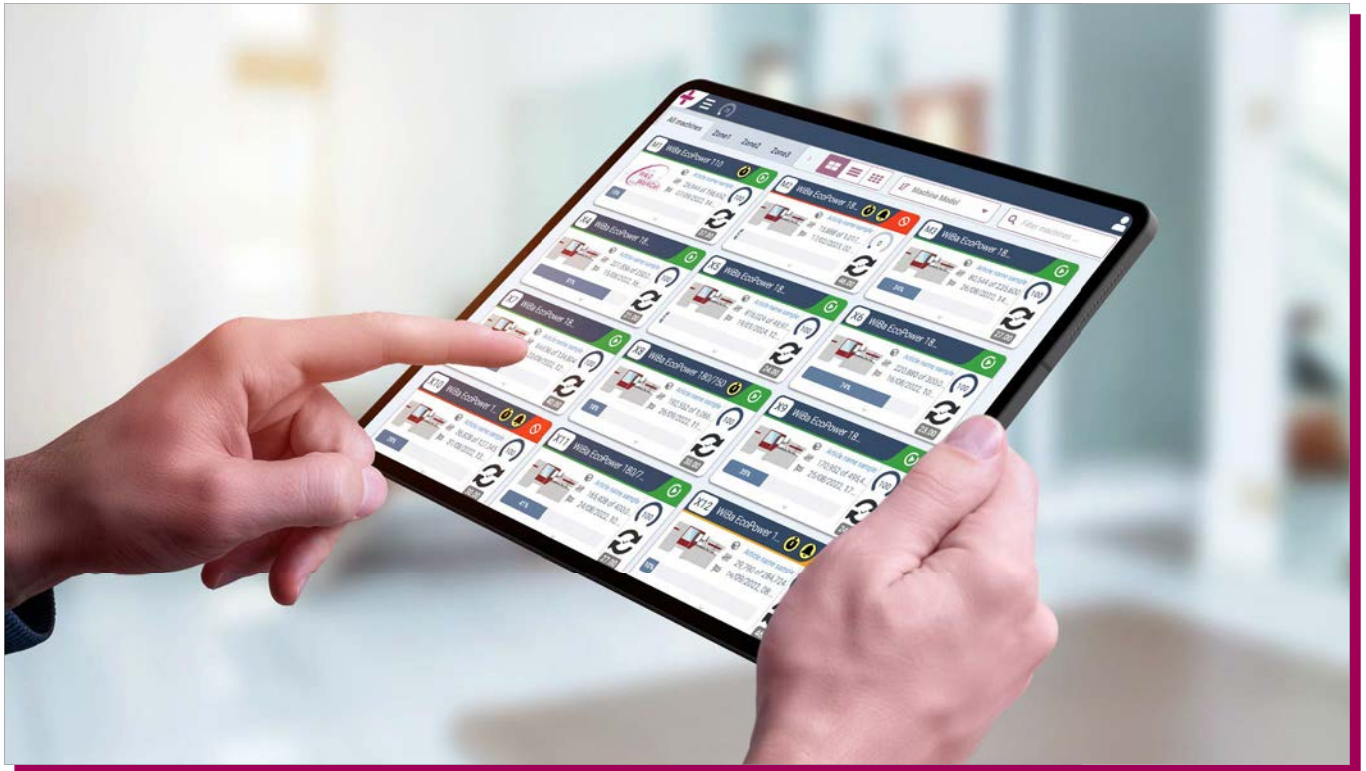


With an MES specially developed for the injection molding industry, the WITTMANN Group provides maximal transparency across the entire range of machinery and equipment. TEMI+ enables intuitive networking between all machines, appliances and systems, processes and production staff on a common platform. The collected data enables real-time monitoring of production processes, efficient planning of capacities and resources, and comprehensive analysis of production data. Optionally, the data can be synchronized directly with the ERP system. In this way, TEMI+ delivers reliable KPIs. Developed in cooperation with the renowned Polytechnical University of Milan, TEMI+ combines sound understanding of injection molding and many years of experience in the industry with ultra-modern IT expertise.

efficiency – transparency – traceability

- **Intuitive operation:** The clear dashboard and self-explanatory menu make it easy for users in a great variety of different areas to fully exploit the MES potential – from the machine operator all the way to the CEO.
- **Always up to date:** Regular functional and security updates keep TEMI+ always up to date.
- **Support for process optimization:** Automatic performance analyses expose any sources of inefficiency without compromise. In this way, TEMI+ supports continuous process optimization and lean processes.
- **Open for all:** TEMI+ flexibly integrates all brands and types of machines, appliances and technologies via EUROMAP 63, EUROMAP 77 and OPC UA, as well as 24 V signals, to enable the integration of older systems, too.
- **Data security and cloud backup:** With TEMI+, your confidential production data are reliably protected against illegal access, manipulation and loss.
- **TEMI+ Academy:** This freely accessible e-learning platform offers tutorials, videos and interactive question-and-answer games for continuous further instruction about all TEMI+ topics – designed for machine setters and operators as well as executives and IT specialists.





Clearly structured dashboard

Your advantages

- Real-time monitoring of all machines, equipment and appliances
- Easy production planning with the help of interactive Gantt diagrams
- Complete traceability of products and material flows
- Automatic OEE analyses
- Integrated maintenance management
- Compatible with all commonly used ERP systems
- Cycle time-controlled integration of upstream and downstream processes (optional)
- Easy export of production data



TEMI+ ensures high profitability and supply capability
across the entire machine park and within global production networks

Transparency for a presentable CO₂ balance

Smart Production – iMAGOxt

Energy consumption is more than just an efficiency key figure. It is a marketable value, which will strengthen your company's positioning and credibility, and boost its resilience. iMAGOxt provides a sound basis for reaching this target. This cloud-based energy management software ensures transparency across all types of consumers and supports the analysis, visualization and optimization of energy consumption.

reducing consumption – increasing margins

MES – Manufacturing Execution System

- **Individually adjustable** thanks to flexible installation of sensors, the scope for collecting and recording data is unlimited. In addition to power consumption, the consumption of gas, compressed air and water, as well as the environmental conditions, can all be monitored in real time.
- **Decision-making aid:** With its precise visualization and analysis of resource consumption and calculation of user-defined KPIs, iMAGOxt provides the basis for decision-making on strategic actions and supports funding applications.
- **Intuitive operation:** The clear-cut visualization dashboard can be adapted to your specific needs and delivers reliable consumption reports.
- **Quick startup:** Thanks to a central gateway (NODE), iMAGOxt is very easy to install.
- **Detection and elimination of waste:** iMAGOxt helps you to find sources of energy loss and to identify power consumption peaks.



Advantages

- Delivery of real-time consumption data
- Compatible with all brands of machines and appliances
- Functioning with standard sensors
- Integrated alarm system

iMAGOxt helps to control, analyze and optimize consumption. The energy costs are reduced by up to 20 per cent.

Case Study

Pozzi Arturo Tessitura S.p.A.

› The challenge

Pozzi Arturo Tessitura S.p.A. in Northern Italy has been producing high-quality textiles since 1957. Rising energy prices forced this company to optimize its processes. To help them take appropriate steps towards optimization, the managers responsible sought transparency for all energy consumers.

› The solution

The installation of iMAGOxt in 2019 made it possible for Pozzi Arturo Tessitura to visualize the individual sources of energy consumption on their production floor in real time. It was found, for example, that the ventilators were running continuously at full capacity, even when they were not needed. Based on the measurement readings, the company invested € 34,000 to install inverters and thus considerably reduced the ventilation system's energy consumption.

At Pozzi Arturo Tessitura, the monthly costs for iMAGOxt a bit more than € 600, covering hardware and software, consulting and installation, and the license fee. This investment has led to monthly cost savings of slightly more than € 3,800.



Energy savings

total 2019 - 2025
1,629,235 kWh

monthly
22,628 kWh



Reduction of CO₂ emissions

total 2019 - 2025
more than 490 tons

these equal
3,000 trees planted



Cost savings

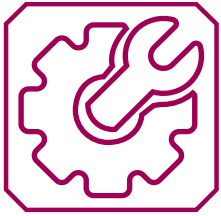
total 2019 - 2025 monthly
€ 276,970 € 3,847

for every € 1,000 invested,
€ 6,200 were saved
ROI: + 522 %



Reliable partnership – throughout a machine's lifetime

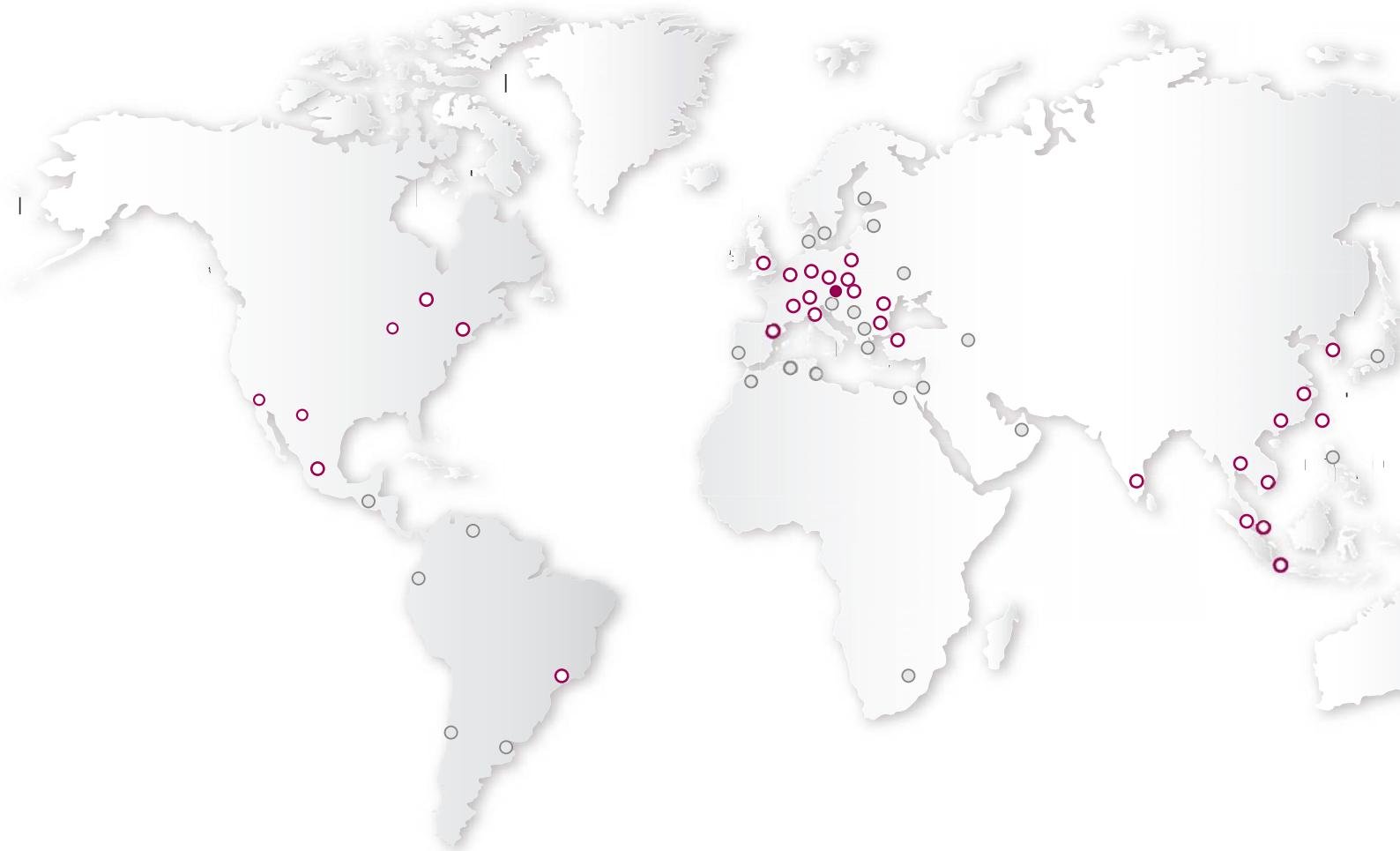
Smart Services



The availability of production equipment is decisive for your competitiveness. Fast, reliable and expertly – the WITTMANN service will be by your side – at your company site worldwide, as well as on the hotline and online. We will support you throughout the entire life cycles of your machines, appliances and equipment. In after-sales service, continuous process optimization, and with retrofits and adjustments to meet changing requirements.

Maximum uptime, performance and service life

- **Global service network:** If you need service, our WITTMANN specialists will be available to you around the world and round the clock with a great store of expert knowledge and experience. With our service locations we are close to our customers in all regions of the world.
- **Individual counselling:** Please challenge us to get more out of your equipment! For efficient and profitable injection molding!
- **Training made to measure:** From career changers to experts – we will compile a suitable training program for every individual. With seminars, training courses and workshops – in our global training centers or on site at your company.
- **Fast spare parts deliveries:** Thanks to decentralized depots, our spare parts will arrive quickly at your company anywhere in the world.





Smart Services modules

WiQuickLook 4.0 – keeping an eye on things while you're traveling

WiQuickLook 4.0 will deliver the most important data about your production and condition of all integrated machines and auxiliaries directly to your cell phone or tablet. Fast, simply and without any extra costs. Just install the app from the app store or the Google Play Store!

Online help – tips for daily practice

With its integrated help system, the Unilog machine control system makes it easy even for inexperienced machine setters and operators to fulfil quality and output requirements. The explanations are easy to understand, and the graphic displays will help where different languages are spoken on the shopfloor. The online help system also includes a troubleshooting section for all mechanical issues, control and process functions.

AIM4Help – accumulated expert knowledge

AIM4Help offers first-level support by fast help with answering all technical questions, including troubleshooting. The AI-based system of experts contains the WITTMANN Group's complete store of knowledge from many decades of experience. It can be reached by either text or voice input.

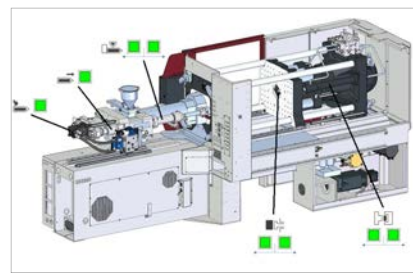
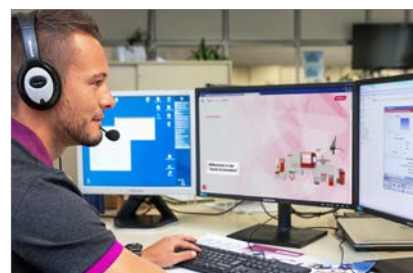
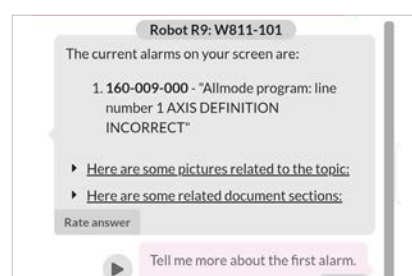
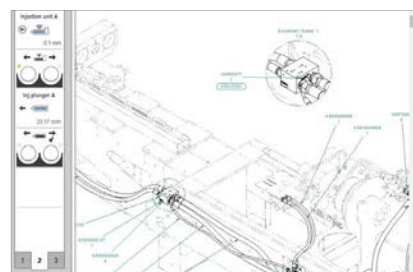
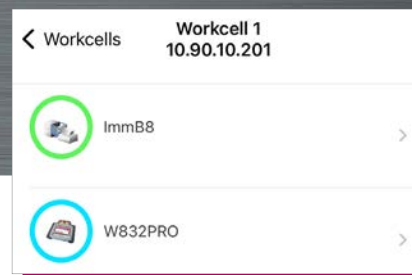
Web-Service 24/7 – effective help round the clock

WITTMANN never sleeps. Round the clock on seven days a week, our experts stand ready at our global service centers to help you with all questions and problems. About 70 per cent of all service requests can be solved within a very short time by online support and remote control via an Internet link.

Health Factor – machine, how are you today?

Collection of status data makes it possible to plan maintenance work and repairs ahead of time and thus keep downtimes short. An example of condition monitoring is the "Health Factor", which discloses the "state of health" of servo-hydraulic axes and pumps. Whenever the key figure of an individual axis shows abnormalities, this points to wear and/or unfavorable operating conditions before rejects are produced or unplanned machinery standstills occur.

OUR RELIABILITY IS YOUR HEAD START



Wittmann

» We develop **technologies that meet the demands of today and tomorrow**, saving materials and energy while protecting the climate. Across the entire injection molding process, from material handling to inline recycling.

We live molding. «

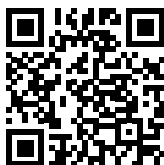
(Dr. Werner Wittmann)



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