



# HOST COMPUTER SYSTEM

Production under digital control

**ARBURG**

# **NET- WORKER**

**Efficient, cost-effective, online:  
digital production management  
powered by ARBURG.**

More transparency, more flexibility, more efficiency! Our ARBURG ALS host computer system is a detailed planning tool for your injection moulding production which is setting new standards. Process data is captured online, clearly prepared and made available end to end. Direct, reliable, active. Turning big data into smart data! Start your digital transformation – with ARBURG as your “smart partner”.

**WIR SIND DA.**



# AT A GLANCE

// Save time and money: our modular ARBURG ALS host computer system offers you all the features that you need for the efficient organisation and cost-effective optimisation of your injection moulding production. Having gained experience from installing several hundred manufacturing execution systems (MES), we can deliver the ideal basis for your digital transformation. //

More flexibility: a wide range of options for integrating the entire production facility (including I/O modules, for example).



More efficiency: optimum utilisation of available resources based on a central overview.

## Practical management

Integration of the entire production facility, including manual workstations? ALS gives you total freedom: from input terminals and I/O modules through to standardised interfaces for injection moulding machines of any make or model. Your system will always be open to extensions, as its component modules can be combined at will.

## Detailed planning

Special features of injection moulding production (mould inserts, for example) make detailed planning far too complex for conventional ERP, PPC and PDA control stations. ALS enables you to optimise your systems based on online data, capacity utilisation, quality and delivery reliability.

## Automatic archiving

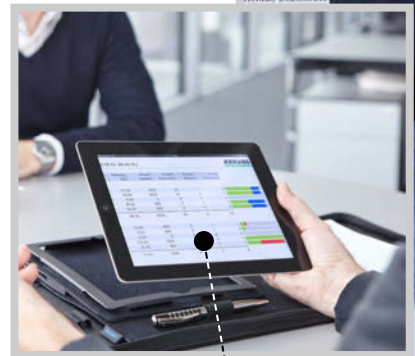
Reliable documentation without complicated manual data acquisition and incorrect entries. All of this makes audit and certification processes much easier, leaving you more time to organise and optimise production – and ALS is designed to help you with this as well.

## Reliable information

ALS actively informs you and keeps you up to date worldwide. Feedback signals and indicators providing information about machines, orders, shifts and production quality are immediately available. Maximum transparency, wherever, whenever and however you need it: whether on a PC, in a production facility or when mobile.

## Simple implementation

We will work with you to plan and implement the ALS system solution that best meets your needs. On-site assistance and a comprehensive range of training options can be relied upon to create a high level of acceptance among your employees as well as ensure a return on your investment in a short time.



More transparency: precise information allows you to carry out analyses and make decisions at any time, wherever you are in the world.

# JUST GET STARTED

// The ARBURG ALS host computer system is the central tool for the efficient organisation of your injection moulding production and therefore an important step towards a smart factory. To make your first steps easier, we offer you ALS-Basic, a selection of modules you can start with immediately. This ensures transparency right from the start and allows you to achieve significant time and cost savings. The modular configuration can be extended at any time, enabling you to react quickly to new requirements. //

## ALS Basic overview

Use this pre-configured module selection to make your daily work even more efficient:

- **Production organisation:** optimise with online information.
- **Production integration:** with an open structure.
- **Production data:** available in real time and across locations.
- **Production documentation:** available in a clearly understandable format at any time with a simple click.



Machine hall

Extra View

Program ad

Machine hall

Program administration

Production overview

Reports

Master data

Service



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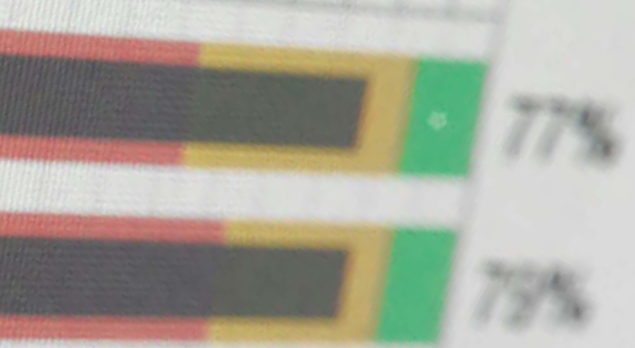
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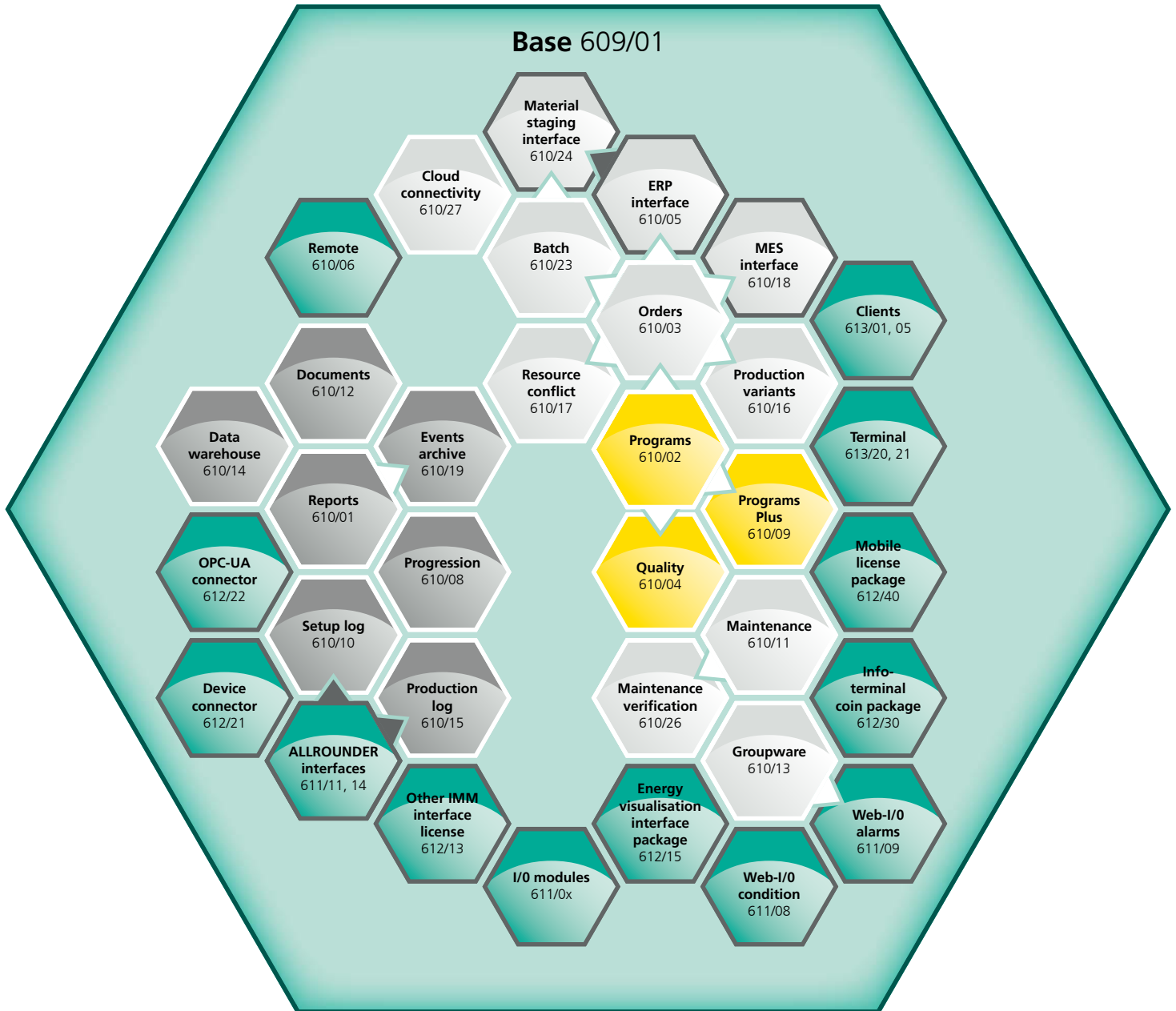
III

Produktion

50% 100%



# ONE TOOL FOR EVERYTHING!





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## Information centre

- \* **Base:** acquire data for production overview and manage injection moulds
- \* **Remote:** remote maintenance via the Internet
- Info terminal coin package:** coin package for user-defined information screens
- \* **Mobile licence package:** licence package for mobile web apps
- I/O modules:** connection of any machine/workstation via signals
- Web-I/O condition:** measuring ambient conditions
- Web-I/O alarms:** output devices for central alarm messages
- ALLROUNDER interfaces:** connectors for ALLROUNDER machines
- Other IMM interface licence:** connectors for injection moulding machines and protocols from various manufacturers
- Energy visualisation interface package:** documentation of energy data, including connection licences for energy meters
- Device connector:** network-based system data acquisition
- OPC UA connector:** data acquisition via OPC UA
- \* **Clients:** access ALS server from PC workstations
- Terminal:** enter data manually

## \* Modules in ALS Basic

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## Production management

- Orders:** plan and monitor orders
- ERP interface:** exchange data with PPC/ERP system
- Maintenance:** manage, monitor and document maintenance orders
- Groupware:** automatic notification of events and creation of cyclical reports
- Production variants:** plan alternative injection moulds and take account of machine performance
- Resource conflict:** monitor injection moulds for duplicate assignment
- MES interface:** exchange data with production management systems
- Batch:** batch change documentation
- Material staging interface:** exchange data with material staging systems
- Maintenance verification:** verify maintenance tasks
- Cloud connectivity:** interface for data export to arburgXworld

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## Quality assurance

- Programs:** manage programs and transfer them to the machine
- Quality:** statistical process control (SPC) and interface with quality assurance systems
- Programs plus:** create parameter lists and comparisons, full text search

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## Documentation

- \* **Reports:** run analyses based on orders, items, injection moulds or machines, and export data
- Progression:** create event log
- Set-up protocol:** daily back-up of set-up protocol
- Documents:** link documents with orders, programs, maintenance and much more
- Data warehouse:** save states and events in database
- Production log:** permanently archive process parameters
- Events archive: archive event data in database

# POWERFUL INFORMATION CENTRE

// Need to respond quickly and flexibly to constantly changing requirements? No problem with our powerful ARBURG ALS host computer system. It supports close IT integration and online data exchange. Across all your production facilities and locations. It can even be integrated with your enterprise resource planning (ERP) system and your personal customer portal arburgXworld. Anywhere in the world. For a direct flow of information from the machine to material planning, purchasing and sales. This is digital transformation at its best! //

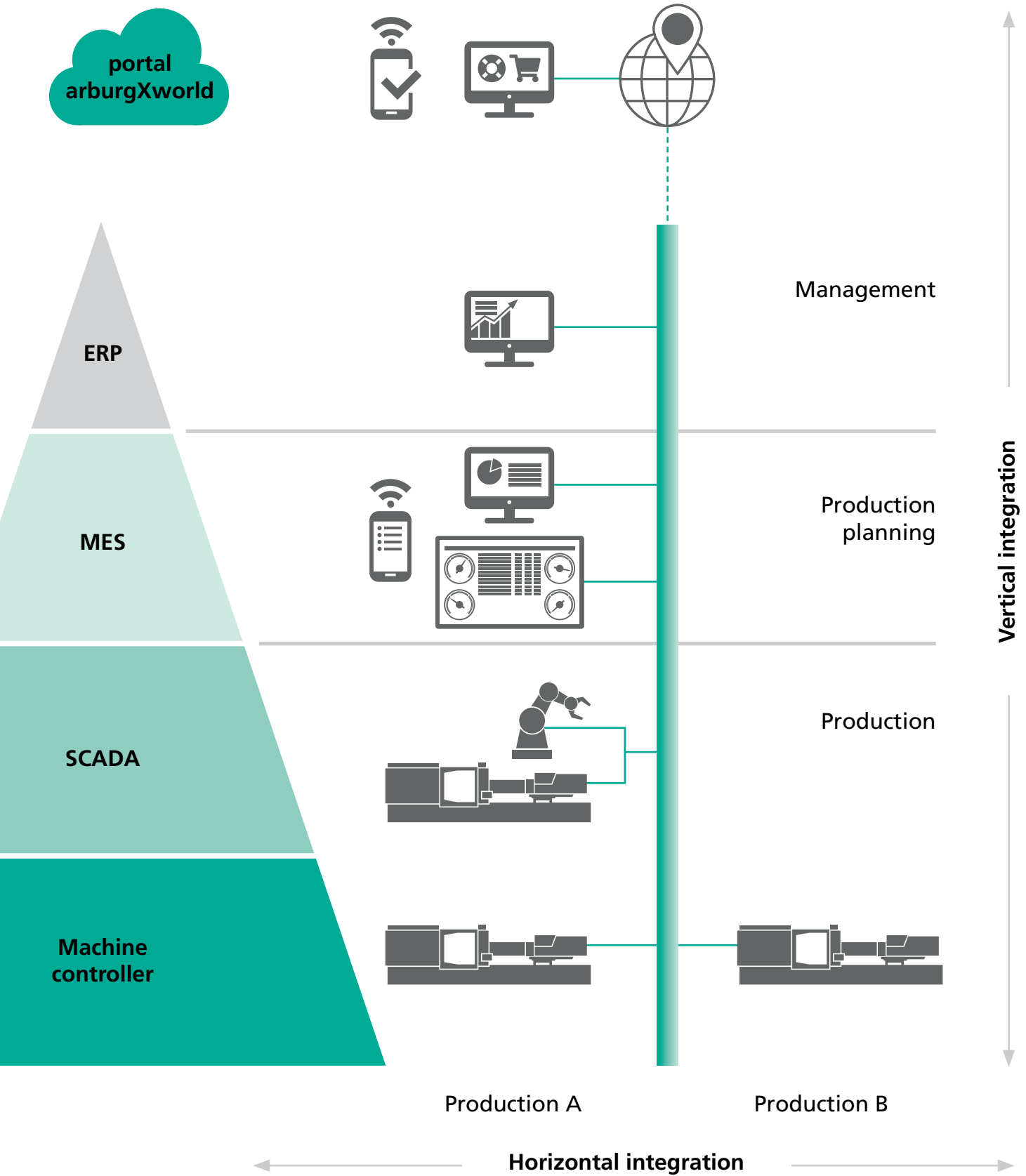
## Highlights

- Completely connected production
- Tailored to injection moulding production
- The latest information at your fingertips – including on mobile equipment
- Evaluations with a click

## NETWORKED INTERACTION



on the basis of an industrial Ethernet network



**arburgXworld:** ARBURG's customer portal

**ERP:** enterprise resource planning

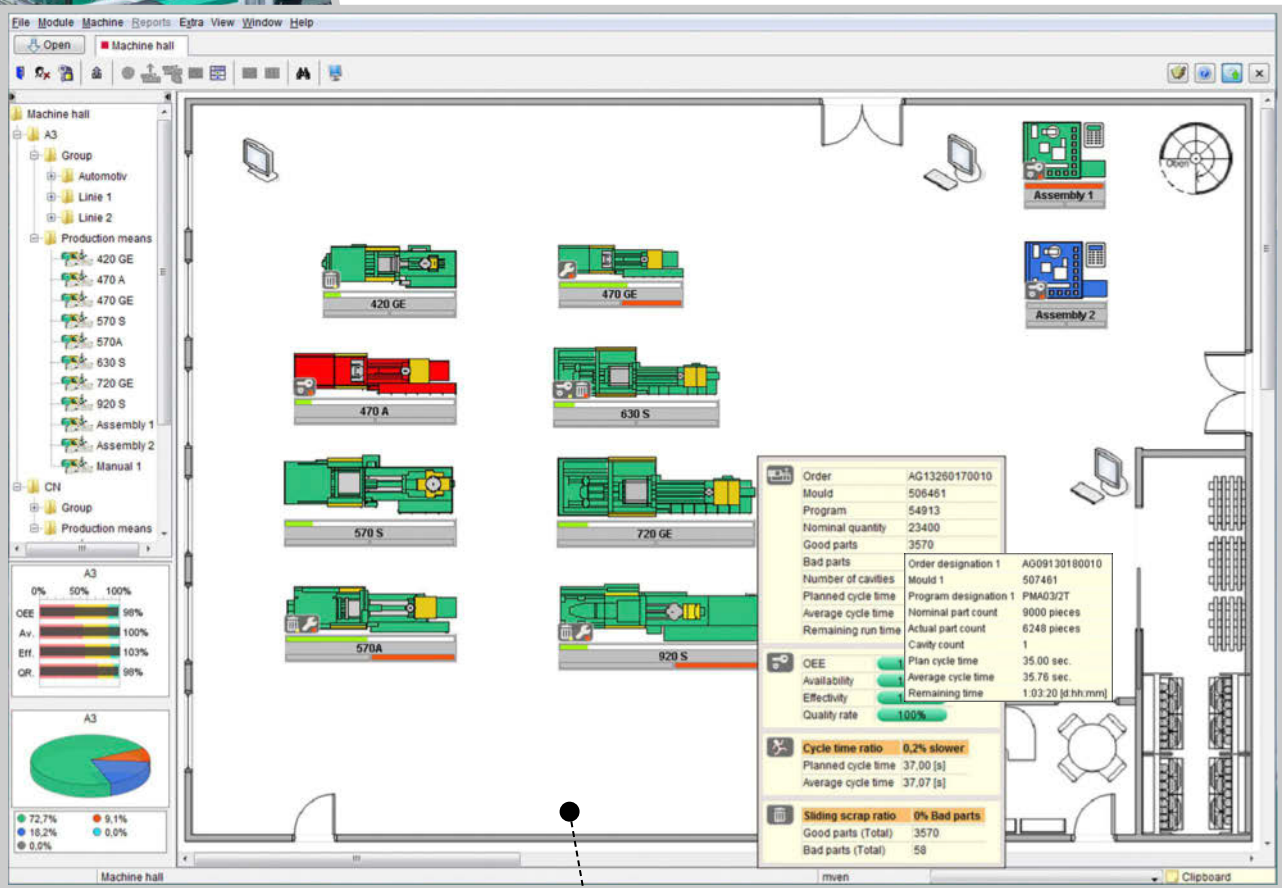
**MES:** manufacturing execution system – ARBURG ALS host computer system

**SCADA:** supervisory control and data acquisition – ARBURG turnkey Control Module (ATCM)



By eliminating manual data entry on 20 machines around

**1,250 h**  
OF WORKING TIME  
SAVED PER YEAR



Central and end to end: integrate the entire machine fleet and acquire production data online.



# A RELIABLE DATA BASIS IS THE KEY TO EFFICIENT PRODUCTION.

## Central acquisition

Basis for cost-effective production: central management of master data with online acquisition of order progress, machine statuses, process parameters and alarm messages. This enables you to plan down to the minute at all times. The combination of machine and production data acquisition (MDA and PDA) allows you to make nominal/actual comparisons, optimise sequences and reduce set-up times.

## Horizontal integration

Enabling you to integrate all production systems – even across multiple locations. Your options:

- input terminals for older machines and manual workstations
- I/O modules for simple connection of any machine or system
- standardised interfaces for all makes of injection moulding machine

Naturally, our ALLROUNDER machines are the perfect partner to work in collaboration with the ALS, e.g. should setting data need to be exchanged or the causes of errors recorded.

## Vertical integration

Thanks to seamless integration with your higher-level PPC/ERP system; the ALS receives order data and automatically transmits information about its progress. This ensures that production data is up to date at all times and increases the added value of your planning system. The arburgXworld customer portal gives you easy access to the feedback signals and indicators from production processed by the ALS – across all of your locations. You can choose where, when, how and which information is made available to you: from smartphone to flatscreen. This results in significantly fewer internal queries about the status of production orders.



## Improve quality

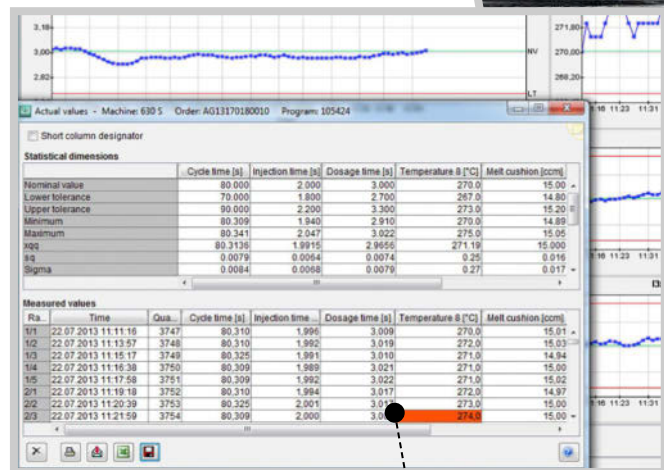
The recording and monitoring of actual values makes changes in the production process traceable and contributes to high product quality. Reference values and tolerance bands can be managed separately for specific products. You will be warned of imminent quality deviations and can respond in good time – without having to interrupt production.

## Proof of quality

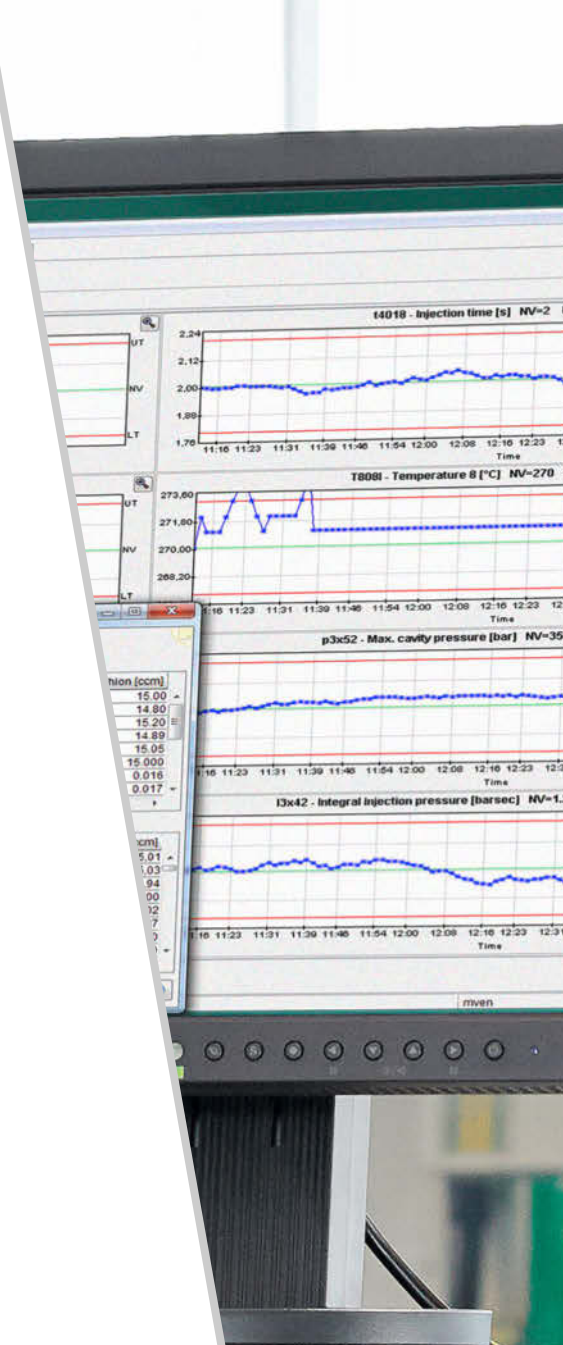
Order-specific logging and archiving of actual values from the process facilitate seamless verification of production quality. Detailed long-term analyses, statistical evaluations and proof of process capability can be implemented (according to ISO TS 16949, for example). Close integration with quality assurance systems is also possible.

## Archive setting data

Setting logs and corresponding screen pages from the machine controller can be archived with setting data. This makes it much easier to find the relevant data for a specific production combination. Also possible with ease: creation of parameter overviews from archived setting data or detailed comparisons of data sets. This enables you to document settings even mid-batch or when an order is still active.



Track and trace at all times: actual values from the processing of specific orders can be recorded, monitored and documented.

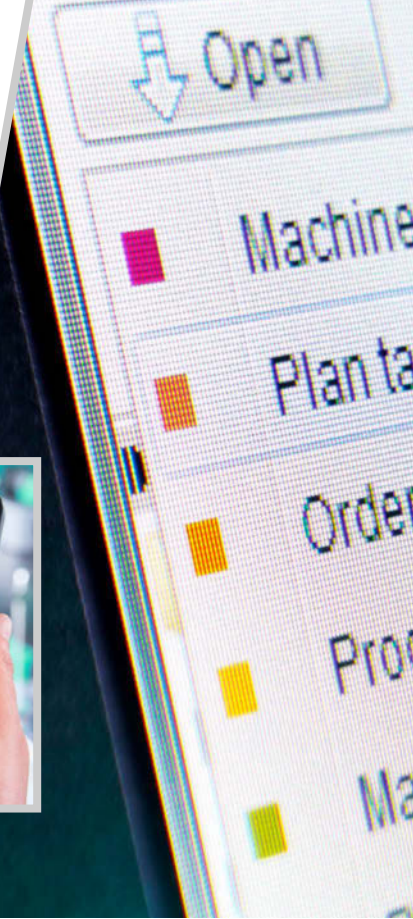


We are technology  
and system partners –  
more than

**30**  
YEARS  
OF EXPERIENCE



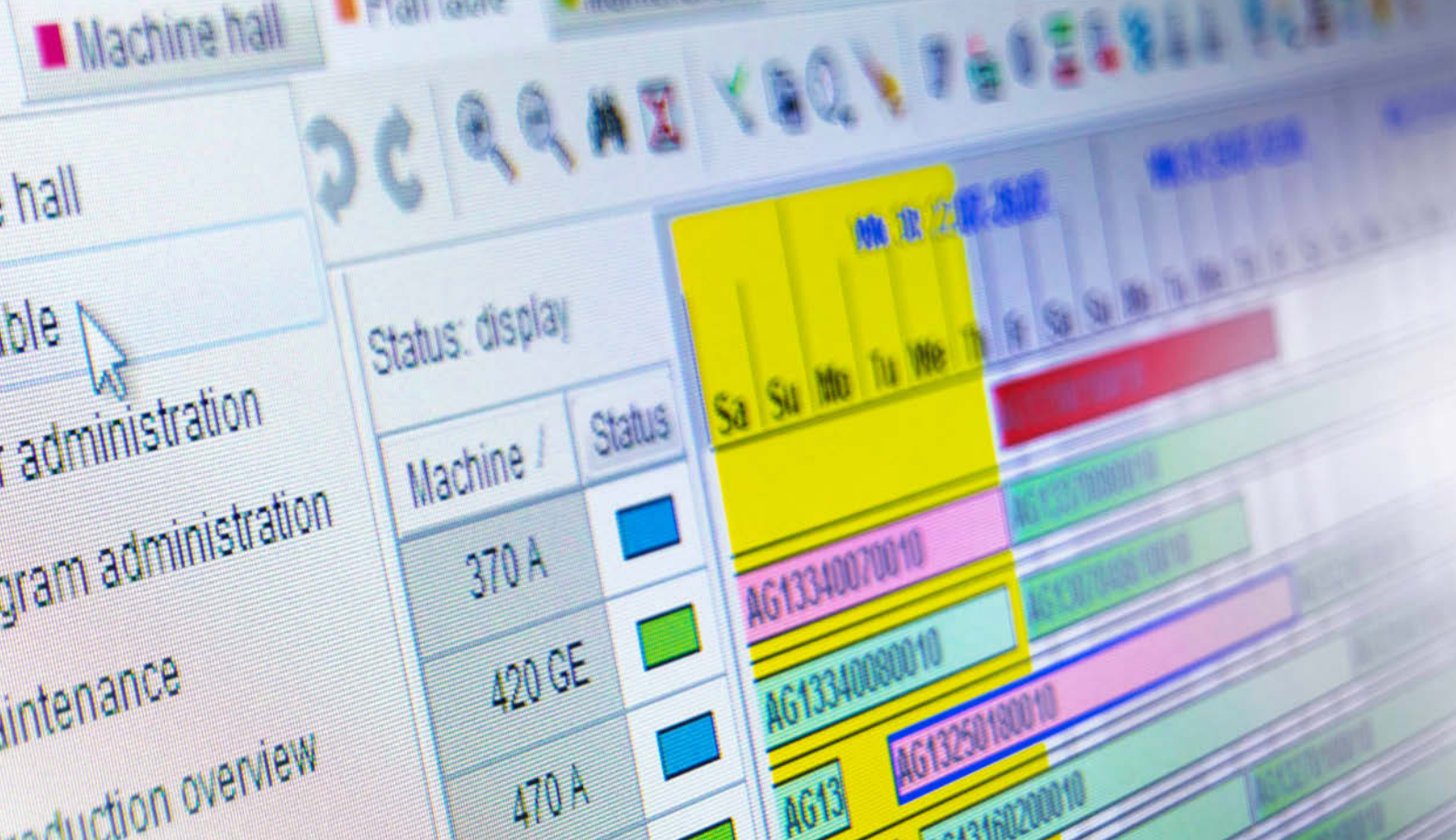
Ideal for shift operation:  
active, instant feedback  
signals via e-mail.



## EFFICIENT PRODUCTION MANAGEMENT

// Manage your available resources, save time and minimise costs. It's simple – with our ARBURG ALS host computer system. Through direct assignment of orders to machines and the creation of queues via the plan table. With forward-looking detailed planning of machine utilisation, production deadlines, numbers of parts, set-up and maintenance work, including personnel requirements. Data exchange with planning systems such as SAP is fully automatic. All of this makes your order planning and monitoring reliable and transparent. //





### **Central management**

Integrative and interactive: your order planning triggers the provision of the setting data, injection moulds and materials required for production. The setting data is transmitted directly to the machine when production of an order commences. This makes production intelligent.

### **Plan precisely to the minute**

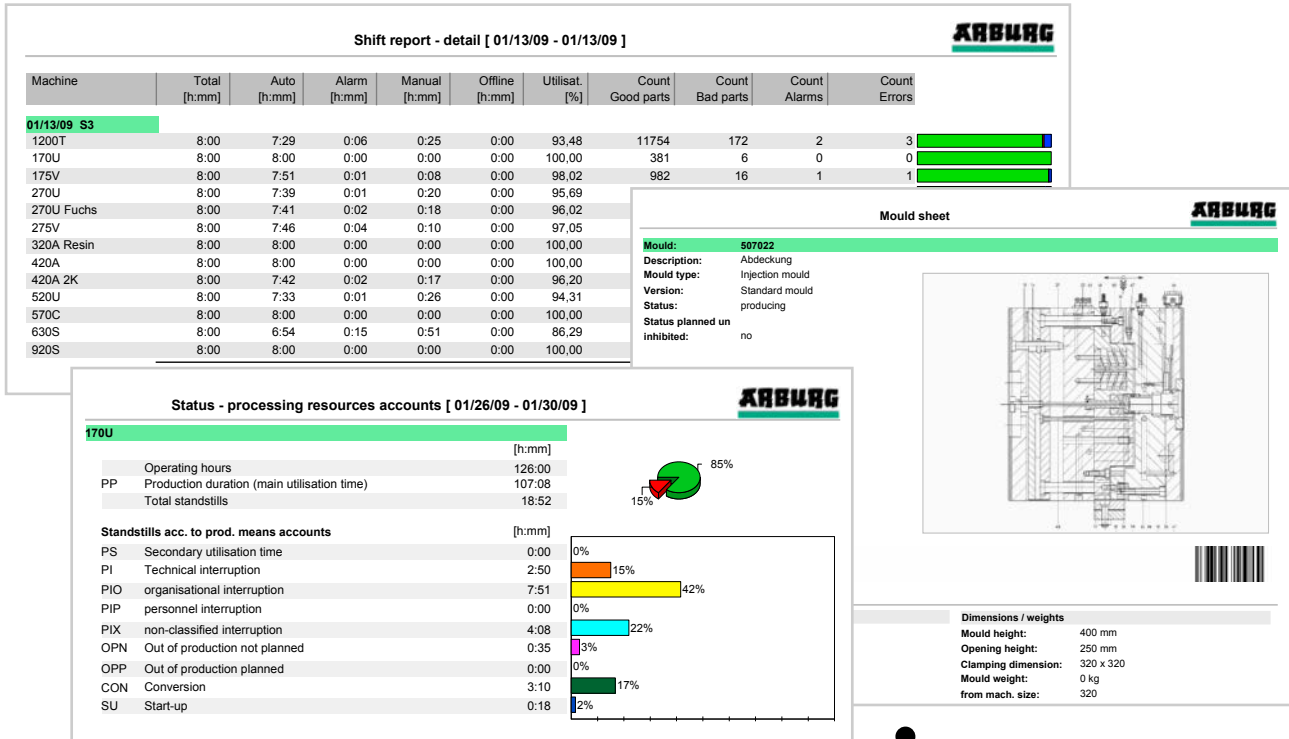
Fully utilise capacities, minimise set-up and maintenance times – all this requires precise information. Include specialities such as cavity counts, family moulds, master moulds or peripheral equipment in your detailed planning. Targeted data exchange also supports areas such as warehousing, mould construction or maintenance.

### **Reliable delivery**

Overview of scheduling and deadlines at a glance: an active display of bottlenecks and potential delivery delays means you can provide information and take action on an ad hoc basis. This helps you to safeguard the timely manufacture of your products and thus achieve a high level of customer satisfaction.

### **Maximise availability**

You can manage and document all maintenance orders for injection moulds, machines and peripheral equipment centrally at one location. The continuous monitoring of deadlines and automatic reminders for pending work via text message, e-mail or info screen protect you against unscheduled machine standstills.



Seamless documentation: ideally equipped for certifications according to GMP, FDA, ISO TS 16949 and ISO 9001.

# COMPREHENSIVE DOCUMENTATION AND ARCHIVING

// To achieve continuous production optimisation you must first identify any potential for improvement. This requires sound information. The ARBURG ALS host computer system provides you with this information. Just click to access all the important indicators and clearly prepared statistics you need to stay up to date at all times. Last but not least, the information gained in this way can also help with decisions on investments. Knowledge is always preferable to speculation. //

## Continuous data acquisition

Long-term, reliable and effortless: documentation of production and order progress with all events. Logging of batch changes as an order log. Recording of parameter changes with all trends and developments in comparison with the specified setting data. In this way, your production data forms an ideal basis for comprehensive complaints management and seamless quality documentation for your customers.

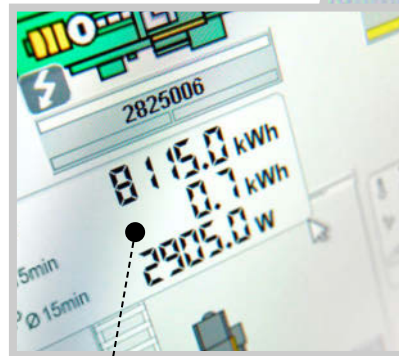
## Targeted analysis

Whether the productivity of machines and injection moulds or the cost-effectiveness of orders and items are under examination: a large selection of predefined reports will quickly help you to find the information you need. Recorded production data can of course also be exchanged with common software tools. This allows you to carry out user-defined analyses with ease.

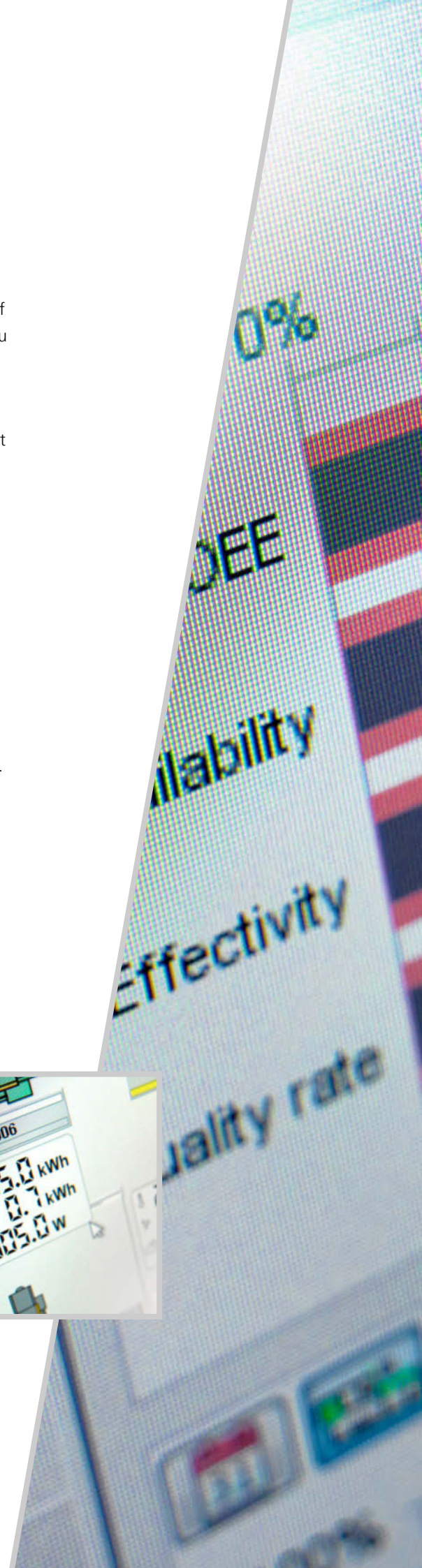
## Central integration

You can quickly access documents relevant to production, set-up or maintenance (e.g. inspection plans, instructions, check lists, reports and drawings). The direct link to master data, setting data and orders provides you with efficient document management. Consistently paperless and centrally available – always up-to-date.

Basis for efficient working: call up information and acknowledge tasks on site, e.g. for maintenance.

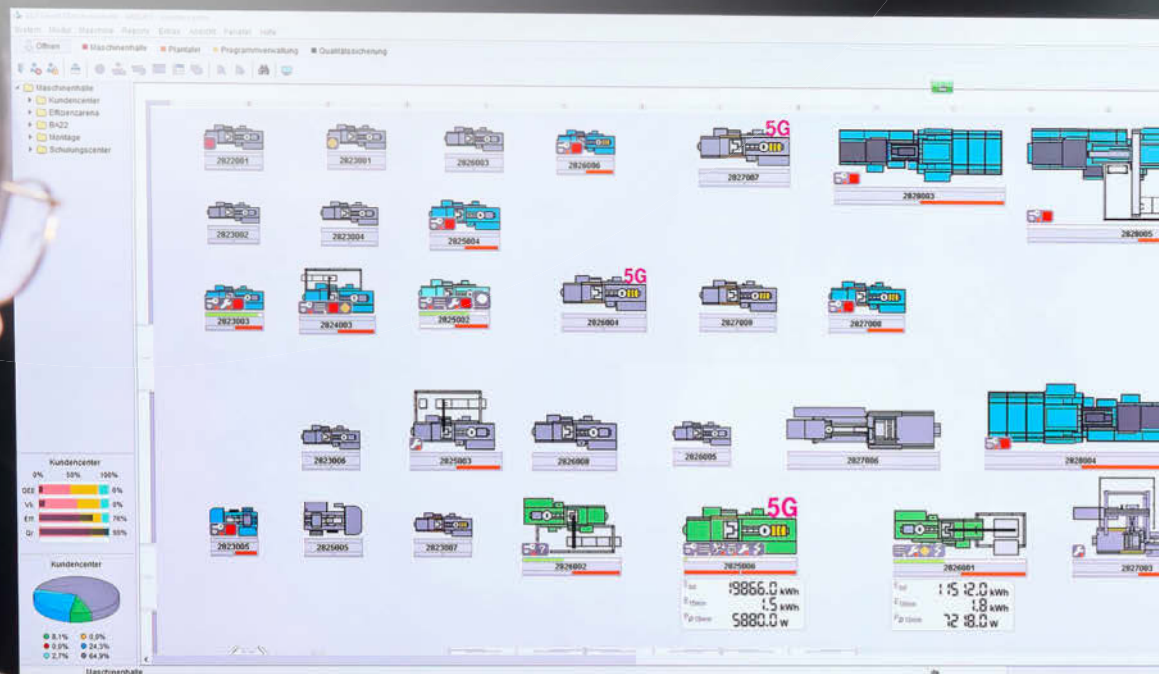


Basis for energy management: order-based acquisition of energy data.



# APPLICATIONS: DIGITAL IN PRACTICE

// Every production facility is unique. And its digital integration is just as individual. The ARBURG ALS host computer system with its modular and flexible concept plays a key role and offers you all the freedom you need for your digital transformation. Your data management is simplified and the transparency of your processes increases. ALS allows you to utilise your available resources much more effectively – whether during order planning, quality assurance, mould management or maintenance. //



The laptop screen displays a data table with columns for machine ID, power consumption, and other metrics. The data is organized into rows, with some cells containing numerical values and others containing text or symbols. The table is partially obscured by the user's hands and the laptop keyboard.

Machine ID	Power Consumption (kWh)	Other Metrics
2825006	19866.0	
	1.5	12.0
	1.8	1.8
	5880.0	72.8



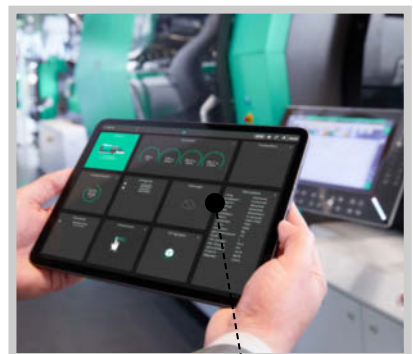
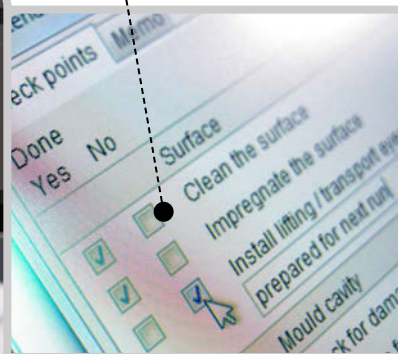
## Smart production – everything under control

ALS is the ideal tool to help you retrieve all important production data for your worldwide locations at any time. You can access everything with a click: fault messages, downtime causes, production progress, indicators such as OEE, availability and quality rate – and not only for ALLROUNDERS, but for all your production systems. This way, you create transparency – whether on large

information displays in production or on your responsible production employees' smartphones. You can configure the individual views depending on the location and purpose of use, for example as a machine control station with alarms, as a quality board with reject rates, or as a job overview.



Interactive check lists:  
safely perform and document  
maintenance work.



Bundled information: individually  
configured, clearly arranged  
and in your corporate design.

## Coordinate maintenance

ALS enables you to document the life cycle of all of the equipment in your production system. Documents for maintenance are stored centrally. Shot counts, operating hours, set-up processes, etc. are determined automatically and directly recorded. Due dates for maintenance work are constantly monitored – and you receive advance warning in good time.

## Optimise set-up processes

From as early as the order planning stage, ALS takes account of the storage location and availability of your injection moulds, including master mould, inserts and accessories. Automatically generated provisioning lists, warehouse management via touch terminal and scanner support, or online transmission of setting data to the machine: all of this makes for efficient operational sequences.

## Documentation according to GMP

You can use ALS for job planning to define production combinations (e.g. machine, peripheral equipment, mould, material) for which there is only one validated data set. You control production enable via user identification with an RFID card and an ACTUAL-TARGET comparison via a scan. This gives you GMP-compliant process documentation at virtually zero cost: from the continuous logging of process parameters and seamless batch tracking to the long-term archiving of set-up protocols and recalibrations.

Transparent processes: Control production even when mobile.



Integrated and informed worldwide: ALS is available in numerous languages.





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Media Center: in-depth,  
captivating, entertaining.

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**WIR SIND DA.**