HOST COMPUTER SYSTEM

Digital production control
NETWORKER

Efficient, cost-effective, online: digital production management powered by ARBURG.
More transparency, more flexibility, more efficiency! Our ARBURG host computer system (ALS) is a detailed planning tool for your injection moulding production that sets new standards. Process data is captured online, clearly prepared and 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.
Saving time and costs: our modular ARBURG host computer system (ALS) offers you all the features that you need for the efficient organisation and cost-effective optimisation of your injection moulding production. With experience from several hundred installed Manufacturing Execution Systems (MES), we deliver the ideal basis for your digital transformation.

**AT A GLANCE**

Greater flexibility: wide range of options for integrating the entire production facility, such as I/O modules, for example.

More efficiency: optimal utilisation of the available resources thanks to a central overview.
**Practical management**
Networking of the complete production facility, including manual workstations? ALS offers you every freedom in this regard: from input terminals and I/O modules through to standardised interfaces for injection moulding machines of all manufacturers. Your system can always be flexibly extended thanks to combinable modules.

**Detailed planning**
Special injection moulding production features such as mould inserts, for example, make detailed planning excessively complex for conventional ERP, PPS and PDA control stations. With ALS, you optimise your systems based on online data, capacity utilisation, quality and delivery reliability of your production.

**Automatic archiving**
Reliable documentation without complicated manual data acquisition and incorrect entries. This simplifies audits and certifications considerably, leaving you more time for organisation and optimisation of your production – ALS also assists you here in a targeted manner.

**Reliable information**
ALS actively informs you and keeps you up-to-date worldwide. Feedback and key figures relating to machines, orders, shifts and production quality are immediately available. Maximum transparency, wherever, whenever and however you need it: whether on the PC, in the production facility or when mobile.

**Simple implementation**
We plan and implement the suitable ALS system solution together with you. On-site guidance, as well as comprehensive training options ensure a high level of acceptance among your employees as well as amortisation of your investment in a short time.
GET ON BOARD

The ARBURG host computer system (ALS) is the central tool for efficient organisation of your injection moulding production and therefore an important step towards the “smart factory”. In order to help you get started, we have put together the ALS package. 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 package overview

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

- **Production organisation**: optimise with online information.
- **Production networking**: with an open structure.
- **Production data**: make available in real time and across locations.
- **Production documentation**: clear and available “per click” at any time.
- **Setting data**: convenient and secure archiving.

FLEXIBLE MODULAR KIT

for the configuration and extension of your host computer system
ONE TOOL FOR EVERYTHING!

Base 609/01

Material Staging Interface 610/24
Batch Interface 610/23
ERP-Interface 610/05
MES-Interface 610/18
Orders 610/03
Production Variants 610/16
Programs 610/02
Programs Plus 610/09
Quality 610/04
Maintenance 610/11
Maintenance Verification 610/26
Groupware 610/13
Info 610/22
Mobile Production 610/20
Mobile Monitoring 610/21
Mobile Maintenance 610/27
Terminal 613/01, 05
Web-I/O alarms 611/09
Web-I/O condition 615/08

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ONE TOOL FOR EVERYTHING!

Functional module
Required module
Interface module
Dependent module
Information centre

★ Base: acquire data for production overview and manage moulds
Remote: remote maintenance via Internet
Mobile production: mobile MDA or PDA terminal
Mobile monitoring: production information on mobile devices
Information: individual info screens
Mobile maintenance: maintenance terminal for mobile devices
I/O modules: connection of any machines/workstations via signals
Web I/O condition: measuring ambient conditions
Web I/O alarms: output devices for central alarm signalling
★ ALLROUNDER interfaces: connectors for ALLROUNDERS
Energy visualisation interface: connection licenses for energy meters
Machine interfaces: connectors for injection moulding machines and protocols of various manufacturers
Device connector: system data acquisition via network
OPC UA connector: data acquisition via OPC UA
★ Clients: access ALS server from PC workstations
Terminal: enter data manually

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 moulds and take account of machine performance
Resource conflict: monitor moulds for double assignment
MES interface: exchange data with production management systems
Batch: batch change documentation
Material staging interface: exchange data with material provisioning systems
Maintenance verification: verify maintenance tasks

Quality assurance

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

Documentation

★ Reports: analyse order, item, mould and machine-related evaluation and export data
Progression: create event log
Set-up log: daily back-up of set-up log
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
Energy visualisation: capture and document energy data

★ Modules in ALS package
POWERFUL INFORMATION CENTRE

// Quickly and flexibly respond to constantly changing requirements? No problem with our powerful ARBURG host computer system (ALS). It enables close IT networking and online data exchange. Across all your production facilities and locations - throughout the world. But also with your production planning and control system (PPC) or enterprise resource planning system (ERP). 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 “per click”
NETWORKED INTERACTION

on the basis of an industrial Ethernet network

Vertical integration

Horizontal integration

MANAGEMENT

PPC/ERP

PRODUCTION MANAGEMENT

ALS

PRODUCTION
Central and comprehensive: integrate the entire machine fleet and acquire production data online.

1,250 HOURS OF WORKING TIME SAVED PER YEAR

by dispensing with manual data entry in the case of 20 machines.
Central acquisition

The 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 target/actual comparisons, to optimise sequences and reduce set-up times.

Horizontal integration

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

• input terminals for older machines and manual workstations
• I/O modules for simple connection of any machines and plants
• Standardised interfaces for all makes of injection moulding machine

Our ALLROUNDERS optimally interact with ALS, e.g. when exchanging setting data or recording fault causes.

Vertical integration

By means of seamless integration with your higher-level PPC/ERP system, ALS receives order data and automatically transmits the order progress. This ensures up-to-date production data and increases the added value of your planning system. You can choose where, when, how and which information is made available to you: from the smartphone to the flatscreen. This results in fewer internal queries regarding the status of production orders.
PREVENTIVE QUALITY ASSURANCE

// Your setting data is priceless. That is why we collect and archive your data secured against loss with our ARBURG host computer system (ALS). This guarantees that your production only uses the current, most recently optimised and released change statuses. Diskettes and memory cards: a thing of the past! Your product quality is constantly reproducible, complaints tend towards zero. A further advantage: you are perfectly prepared for audits and certifications.

Always up-to-date: central access to optimised and approved setting data.
**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 product-specifically. You will be warned of imminent quality deviations and can respond in time – without having to interrupt production.

**Proof of quality**

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

**Archive setting data**

Setting logs and corresponding screen pages of the machine control system can be archived with the setting data. This makes it much easier to find the relevant data for a specific production combination. Also easily possible: creation of parameter overviews from archived setting data or a detailed comparison of data sets. This enables you to document the settings even during a batch or a currently active order.
EFFICIENT PRODUCTION MANAGEMENT

Manage your available resources, save time and minimise costs. It’s simple – with our ARBURG host computer system (ALS). Through direct assignment of orders to machines and the creation of queues via the planning chart. With forward-looking detailed planning of machine utilisation, production dates, unit volumes, 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, moulds and materials required for production. The setting data is transmitted directly to the machine when production of the 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 the number of cavities, 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
The current scheduling status at a glance: an active display of bottlenecks and potential delivery delays means you can provide information and act on an ad hoc basis. This helps you to ensure the timely manufacture of your products and thus a high level of customer satisfaction.

Maximisation of availability
You can centrally manage and document all maintenance orders for moulds, machines and peripheral equipment 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 downtimes.
You must first identify any potential for improvement to achieve continuous production optimisation. This requires sound information. This information is provided by the ARBURG host computer system (ALS) per click – with all the important indicators and clearly prepared statistics, you are always up-to-date. Another benefit is that the available data can also be used during the decision-making process relating to capital investments. Knowledge is always preferable to speculation.

COMPREHENSIVE DOCUMENTATION AND ARCHIVING

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

Long-term, reliable and with no effort: 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 with regard to your customers.

Targeted analysis

Whether the productivity of machines and moulds or the cost-effectiveness of orders and items are under examination: a large selection of predefined reports quickly provides help. Recorded production data can of course also be exchanged using common software tools. This allows you to easily realise individual evaluations.

Central networking

You can quickly access documents relevant to production, set-up or maintenance, such as inspection plans, instructions, checklists, 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.

A basis for efficient work: call up information and acknowledge tasks on site, e.g. for maintenance.

A basis for energy management: order-based acquisition of energy data.
APPLICATIONS: DIGITAL IN PRACTICE

Every production facility is unique. And its digital networking is just as individual. The ARBURG host computer system (ALS) with its modular, 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 is increased. It allows you to utilise your available resources much more effectively – whether during order planning, quality assurance, mould management or maintenance.
**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. Access everything per click: fault messages, downtime causes, production progress, indicators such as OEE, availability and quality rate – and not only for ALLROUNDERS, but for all production systems. This creates transparency – whether on a smartphone or on a large screen in production. You can configure the views individually depending on the location and purpose of use, e.g. as a machine control station with alarms, as a quality chart with reject rates or as a production overview with orders.

Interactive checklists: safely perform and document maintenance work.

Comprehensive information: individually configured, clearly arranged and in your corporate design.
Networked and informed worldwide: ALS is available in numerous languages.

Validated processes: enabling production via handheld devices.

Coordinating maintenance
ALS enables you to document the life cycle of the entire 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 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 this adds up to efficient work processes.

Documentation according to GMP
For order planning you can use ALS to define production combinations (e.g. from 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 means that you receive GMP-compliant process documentation at virtually no extra cost: from the continuous protocolling of process parameters via seamless batch tracking through to long-term archiving of set-up protocols and recalibrations.