

# **HYBRID ALLROUNDERS**

More power: efficient combination  
of hydraulic and electric technology

**ARBURG**

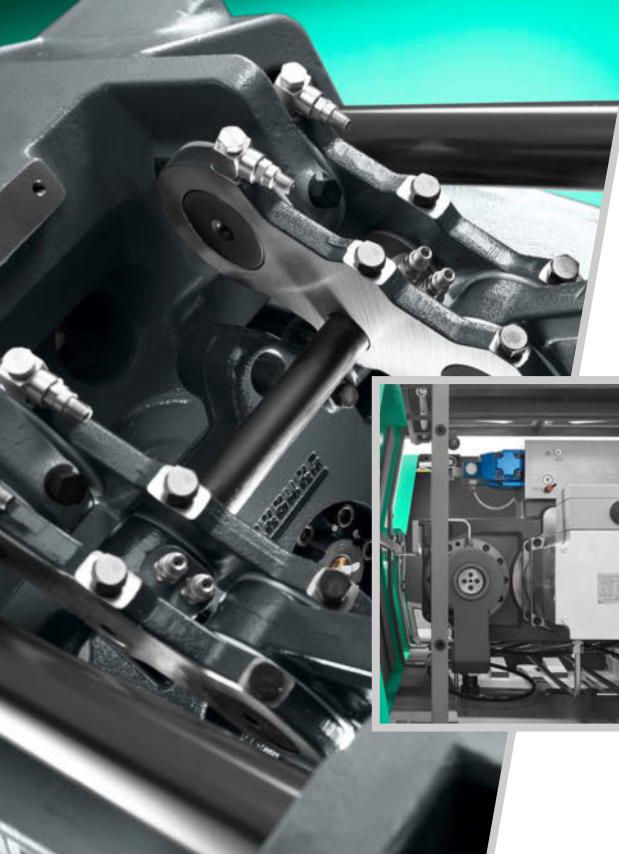
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# HIGH PERFORMANCE

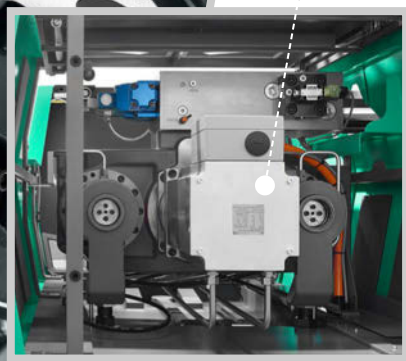
**ALLROUNDER HIDRIVE:**  
Keeping unit costs under control.  
through high performance.

"Made by ARBURG - Made in Germany" - If you want top performance in mass produced items, then you should use our hybrid ALLROUNDERS. That's because the HIDRIVE brings the best of our modular product range together in a single series just for you: electric speed and precision paired with hydraulic power and dynamics. Reliable, highly-productive and simultaneously energy-efficient – for your production. Day after day. 24 hours. Around the clock.

**WIR SIND DA.**



Servo-electric drives guarantee optimised cycle times and energy savings.



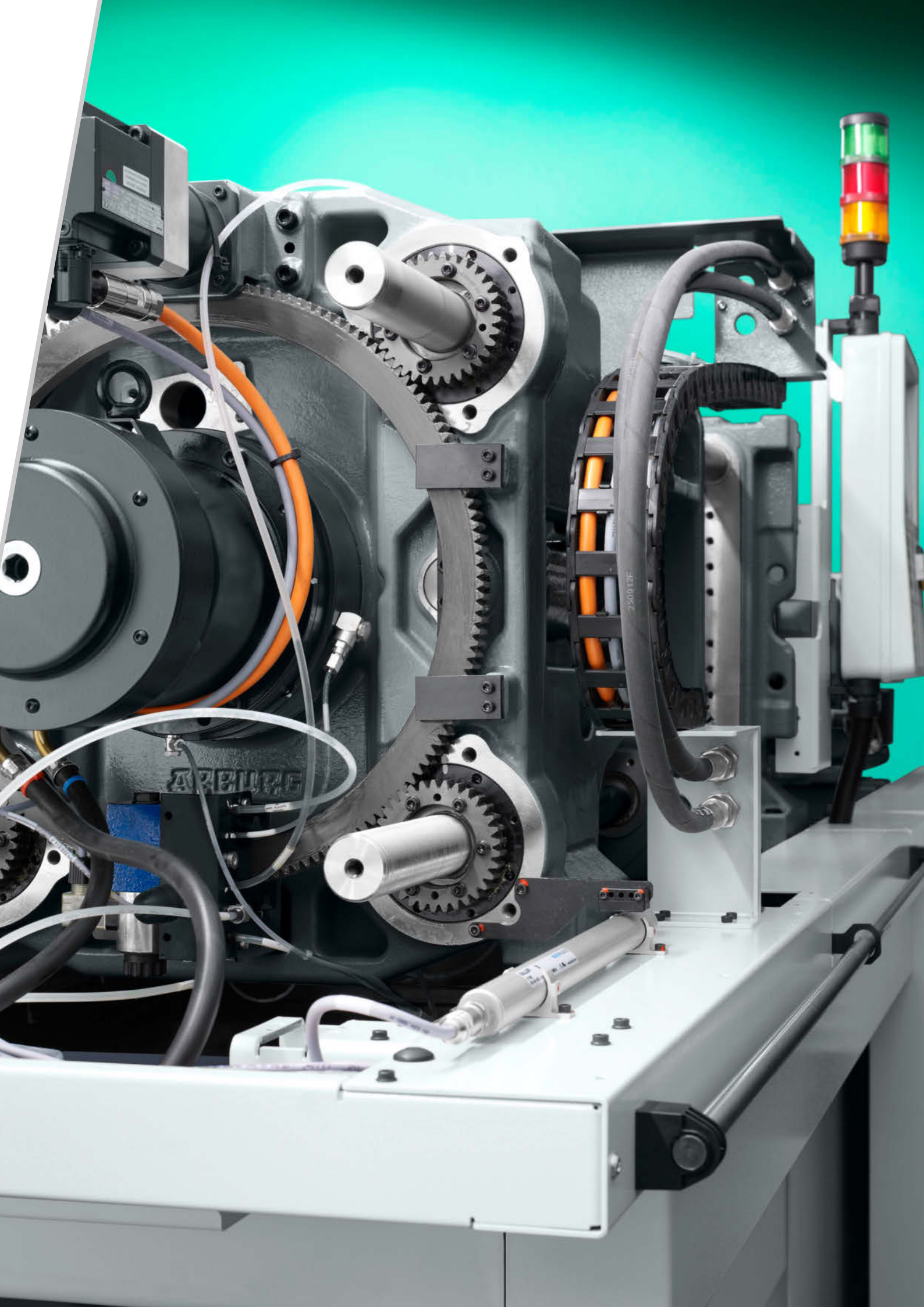
Hydraulic accumulator technology: the best basis for large, dynamic injection volume flows.

## AT A GLANCE

// The intelligent concept of our hybrid ALLROUNDER combines sophisticated electric and hydraulic clamping and injection units, as well as ARBURG's unique control technology, to create a particularly cost-effective series. Thanks to the performance variants and the modular structure, a machine series has been created that provides you with uncompromising high performance. With the HIDRIVE, you always implement your production tasks at competitive unit costs, no matter how demanding they become. //

### Machine concept: ideal for mass-produced technical items

- Extremely short dry cycle times
- Simultaneous movements
- Large, dynamic injection flows
- Up to 40 per cent reduced energy requirement



# HIDRIVE: MORE HYBRID PERFORMANCE

// Do you want to make your production more efficient and at the same time conserve resources? With a perfect spectrum of performance variants, our hybrid machines are suitable for all applications. The high-quality technology ensures economical operation even when performing demanding tasks. For you, this means: more flexibility and more independence! //

## COMFORT performance variant

Resource-saving technology combined with reliable design.

Predestined for technical parts and particularly efficient operation.

- Energy requirement reduced by up to 50 per cent (compared to comparable hydraulic machines).
- Optimised oil management reduces cooling water and oil requirements (up to 35 per cent).
- Dry cycle times up to 30 per cent shorter.
- Optimised accessibility for set-up and service activities.



# WE CONTINUOUSLY DEVELOP PROVEN TECHNOLOGIES IN A PRACTICAL AND HOLISTIC WAY.

## PREMIUM performance variant

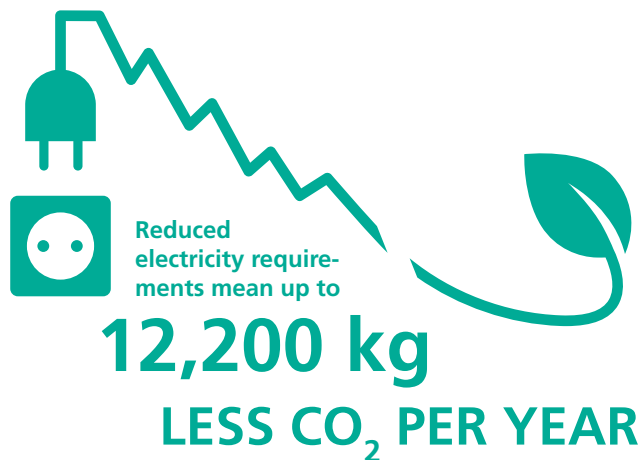
Version expanding on the "Comfort" performance variant for a wide range of applications.

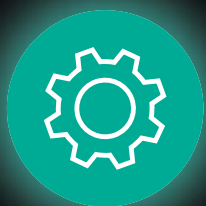
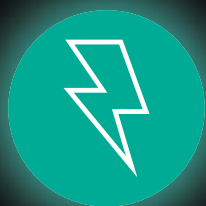
- Significantly reduced energy requirement and emissions.
- Dry cycle times up to 30 per cent shorter.
- Simultaneous machine movements of two hydraulic secondary axes.
- Equipped with GESTICA as standard.

## ULTIMATE performance variant

Version expanding on "Premium" performance variant for high-speed and challenging processes.

- Dry cycle times up to 40 per cent shorter.
- Hydraulic accumulator technology for simultaneous and precise movements of all axes.
- Equipped with aXw Control ScrewPilot as standard.

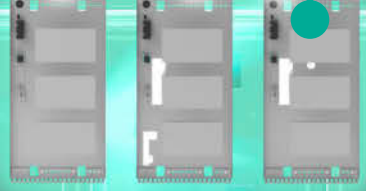
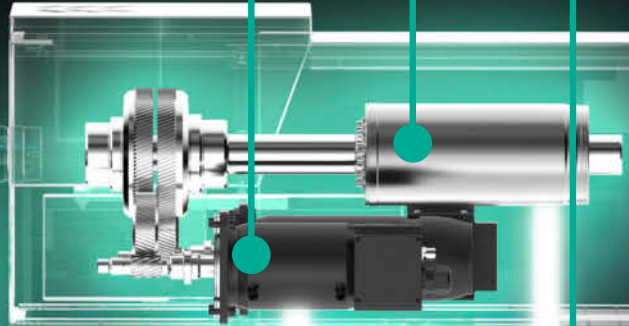
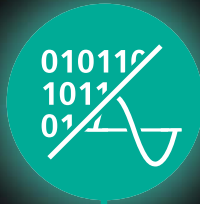
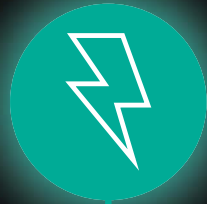
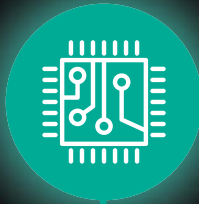
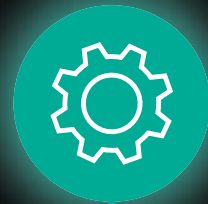
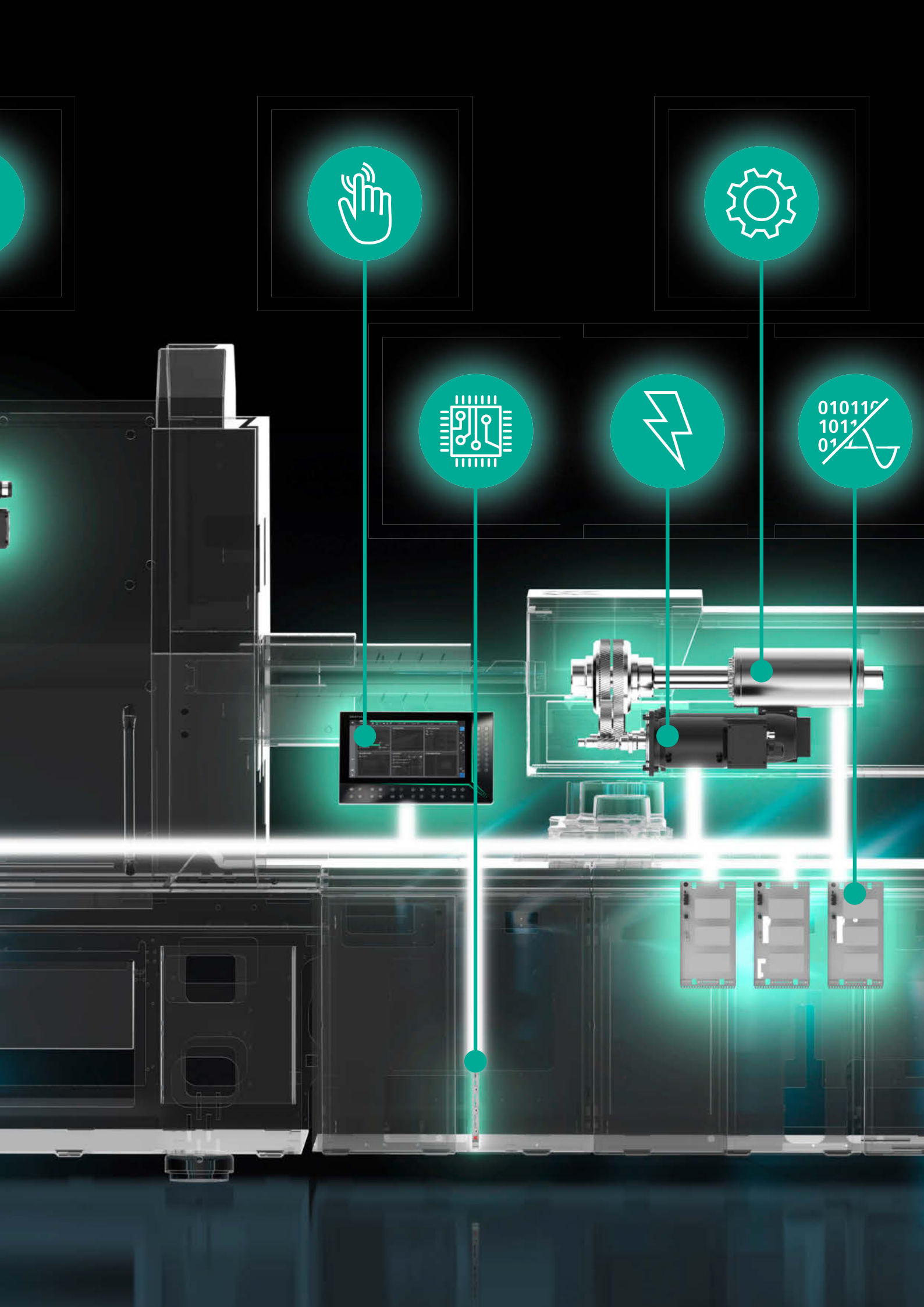




## OUR DRIVE TRAIN – SOURCE OF POWER AND QUALITY

// Without an excellent drive, excellent products cannot be produced. Better still, if you not only develop these high-quality components yourself, but also build them yourself. This philosophy also pays off in the drive train. The acquisition and integration of the drive specialist and long-standing development partner AMKmotion into the ARBURG family reflects this strategy and the continuation of tradition. This allows us to respond in a highly flexible manner to market requirements as well as customer wishes. And what does this mean for you? More independence, ongoing technological advantage, higher degree of utilisation and flexibility. All advantages that pay off very quickly. //







## Drive for greater performance

Our electric ALLROUNDERS are high-end solutions for your production. Dosing and mould opening and closing are servo-electrically driven – energy-saving, precise and frequently simultaneous movements included.

## Drive for greater flexibility

We have thought about the drive train of our ALLROUNDERS in a holistic way. This way, everything can be tailored exactly to your needs. An example: when it comes to the secondary axes for the ejector, nozzle movement and core pull, you can choose between hydraulic and electric alternatives.

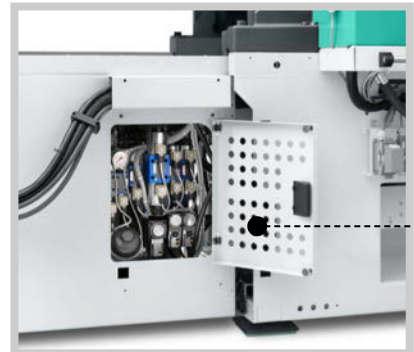
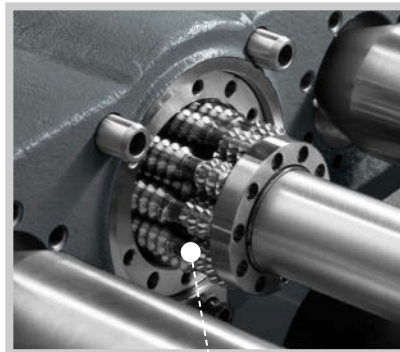
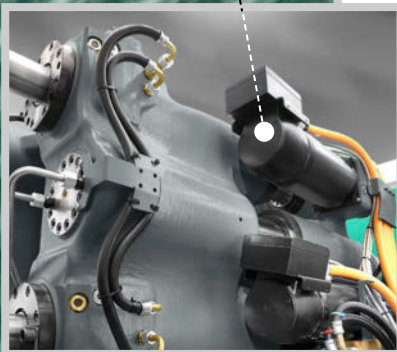
## Drive for greater independence

We develop and build the components of the drive train ourselves. We have been following this philosophy for a long time. This means we are largely independent of suppliers and have large parts of the supply chain in our own hands.

## Drive for greater reliability

Our robust drive train is the foundation for long and stable running times. The result speaks for itself: less maintenance and high reliability ensure smooth production and a fast return on investment.

Robust and reliable:  
Servo motors are generally  
liquid-cooled.



Extremely reliable: five-year  
warranty for our planetary  
roller screw drives.

# THE DRIVE TRAIN IS OUR EXPERTISE



## Drive:

Liquid-cooled servo motors: low emissions, high operational reliability and recuperation.



## Mould:

From a single source: application-specific electric drives for mould functions.



## Control system:

GESTICA operating panel: smart assistants for active operator support.



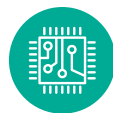
## Automatic control technology:

Inverter with closed cooling circuit for fast cycles and long holding pressure phases.



## Transmission elements:

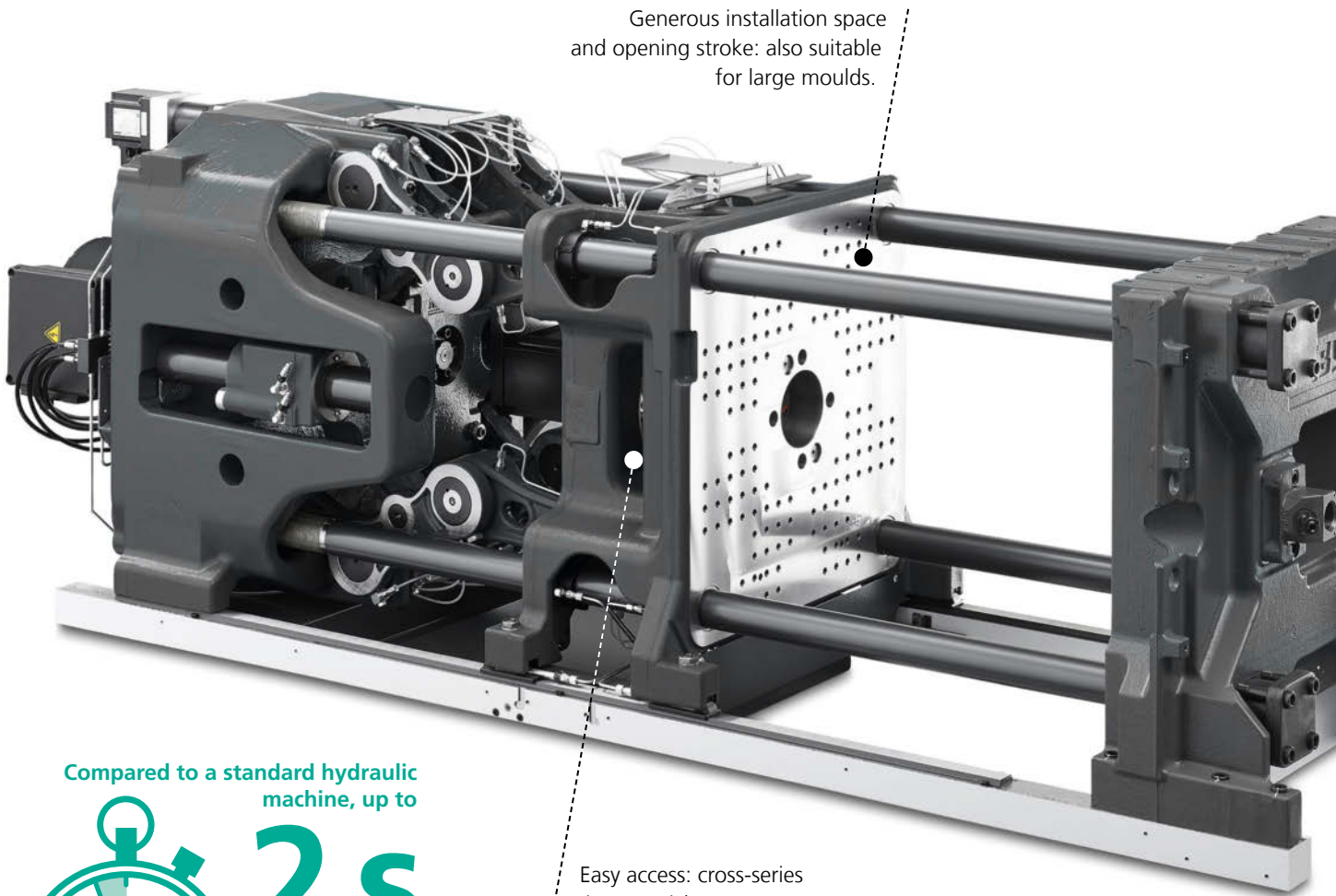
Direct-acting powertrain: reliable power transmission for high degree of utilisation.



## Networking:

ALLROUNDER 630 to 920 equipped with connectivity modules and additional assistance packages.

Powerful: secondary axes are optionally driven servo-electrically or with small hydraulic accumulator systems.



Generous installation space and opening stroke: also suitable for large moulds.

Easy access: cross-series ejector quick-connect coupling simplifies set-up.

Compared to a standard hydraulic machine, up to



**2 s**  
**SHORTER**  
DRY CYCLE TIME

## CLAMPING UNITS: PRODUCTIVE

// High-precision and cost-efficient: This is how the toggle-type clamping units of our hybrid ALLROUNDERS work. Save money every day with energy-efficient running characteristics! The kinematics of the double five-point toggle are optimally adapted to the servo-electric drive. Looking to significantly reduce cycle times? Due to the extremely short dry cycle times of the HIDRIVE machines and simultaneous movements of the clamping unit and ejector, this is not a problem! //

## Five-point toggle system

The double five-point toggle features a stable construction with multiple guidance points. This provides for absolutely symmetrical force application during movements and mould locking – even with heavy moulds. Despite the compact design, large opening strokes are possible.

## Protective mould use

The box-type construction of the movable platen is longitudinally guided and supported. Together with four tie-bar guidance, this results in high-level parallelism and precision for extended mould service life. Highly sensitive tie bar strain measurement ensures active mould protection.

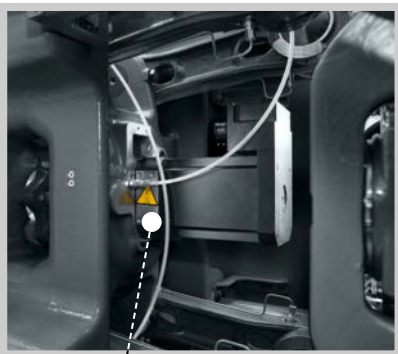
## Precise positioning

The centrepiece of our closing system is the mechanically-rigid, high load-bearing planetary roller screw drive, which enables us to assume all positions with a high degree of precision. This simplifies the transfer of parts to robotic systems.

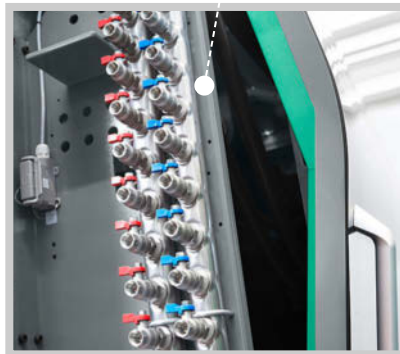
## Clamping force control

The toggle can be adapted with ease to different mould installation heights by means of a servo-electric adjustment system. The clamping force control generates a consistent locking force and thus automatically compensates for the thermal expansion of the mould.

Media connections close to the mould (optional): the increased protection towards the back of the machine provides for much free space.



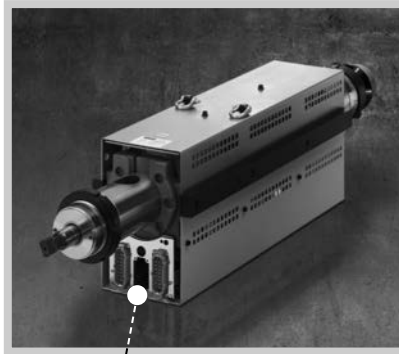
Servo-electric ejectors (optional): particularly precise dropping of moulded parts for even shorter cycle times.



Folding steps: convenient access to the clamping unit of the ALLROUNDER 1120 H.



Swivelling injection unit: The screw can then be removed without dismantling the cylinder module.



Simple changeover: central connection of all cylinder module supply units and screw quick-connect coupling.

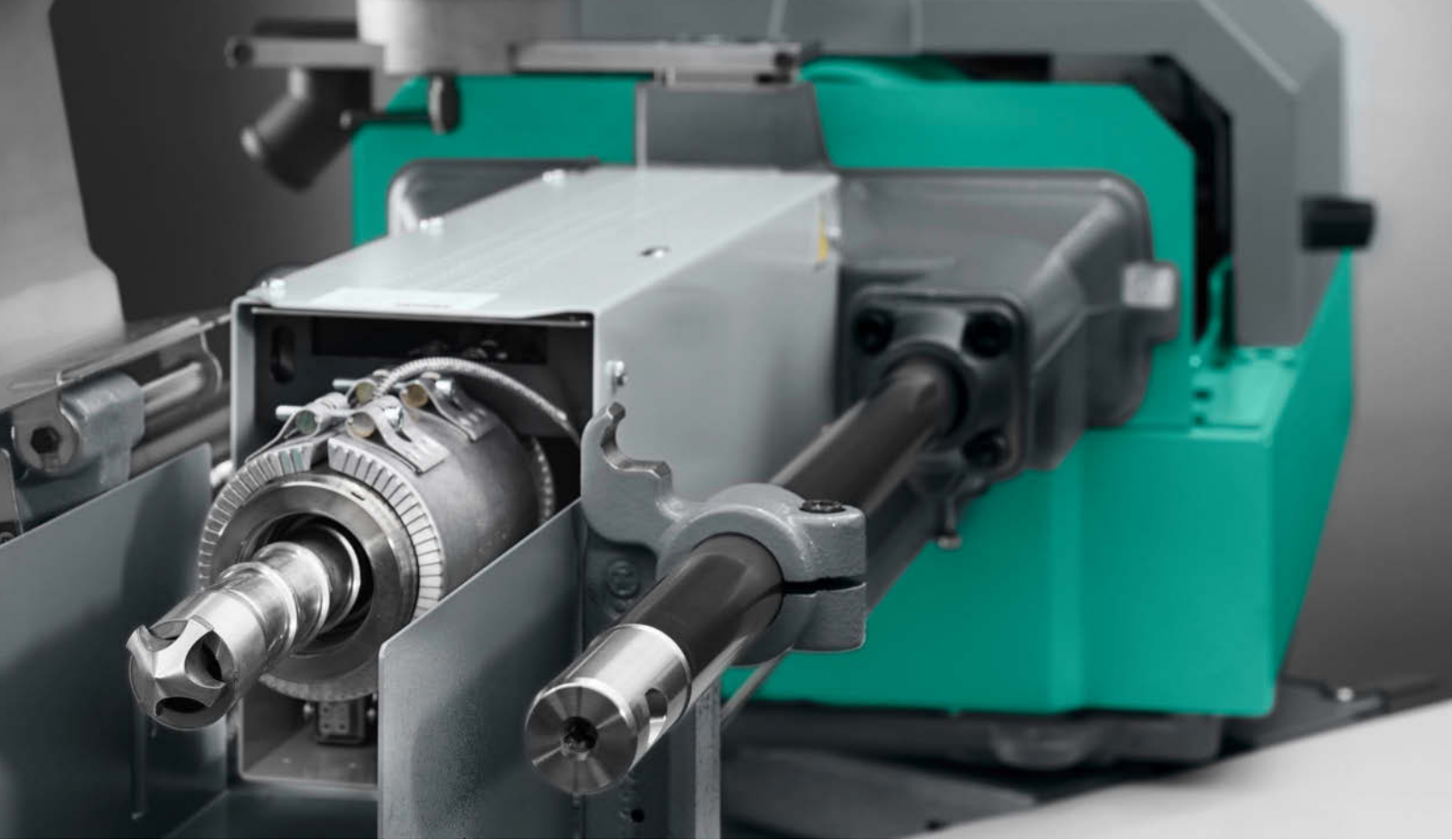
## INJECTION UNITS: DYNAMIC

// Homogeneous material preparation and precise injection form the basis for high-quality part production. With our HIDRIVE, this is achieved through the combination of regulated injection with the aXw Control ScrewPilot, dynamic hydraulic accumulator technology, and energy-saving servo-electric dosing drive. You can keep your cycle times under control thanks to cross-cycle dosing and simultaneous nozzle movement. Another tangible advantage for you is that our injection units can be quickly converted and cleaned. //

REPRODUCIBLE  
**MOULD FILLING**



with our ScrewPilot – fluctuations in the shot weight can be significantly reduced



### **Wide variety of combinations**

The cylinder modules are compatible with all series and are finely graded. Various versions ensure optimum protection against wear. In addition, screws in special geometries allow you to process all common plastics.

### **Regulated injection**

Precise pressure and speed control during injection using the ScrewPilot. Dynamic acceleration via hydraulic accumulator technology: our combination for reproducible mould filling and moulded part quality as well as high injection capacity.

### **Torque-free nozzle contact**

Our two-tie-bar guidance facilitates absolutely leak-tight nozzle contact – also ideal for both flat and extended nozzles.. The build-up of the nozzle contact forces is programmable and regulated, which reduces wear on the nozzle and mould.

### **Electric dosing system**

The independent dosing drive leads to obvious energy savings plus increased precision. Another result: significantly reduced cycle times in some cases. Since the melt can be dosed simultaneously and cyclically, it can also be processed more gently.



# CONTROL SYSTEM: SMART

// Maintaining control over the machine, mould, robotic technology and peripheral technology requires a suitably powerful central control system. This calls for smart technology that offers extensive data integration options, monitors and adaptively controls your process, and supports you in every operating situation. All the features of our SELOGICA and GESTICA control systems are designed for a fast, secure and convenient set-up and operating process. This allows you to get the best out of all your applications. //

## Highlights

- SELOGICA and GESTICA – fully compatible
- Graphic sequence programming
- Direct plausibility checks
- Assistance packages and connectivity modules
- “Ready for Digitalisation”
- Central control system for complete production cells

**i** / Further information:  
GESTICA brochure



## Central management

Thanks to their unsurpassed standard operating system, the SELOGICA and GESTICA save time and costs. The simple integration of different peripheral equipment enables sequence management even for complete production cells, with only one data set. Short cycle times? Can be programmed!

## Intuitive operation

The graphics-based operational philosophy can be comprehended intuitively and is always geared towards optimisation of the processes. Our unique graphical sequence programming with direct plausibility check always clearly indicates the logical position of the current programming step. Operating errors? Out of the question!

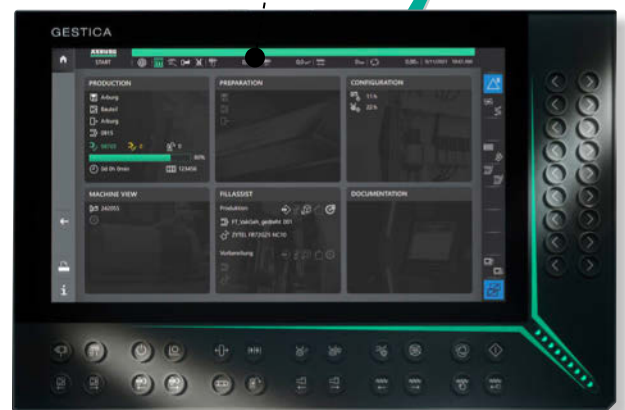
## More efficient operation

Easy set-up and fast start-up. Assured part quality and excellent productivity. Controlled system status and time-saving support. Higher-level data exchange and more transparency. Our assistance packages and connectivity modules provided as standard form the basis for all these benefits. Ready for digitalisation? Of course!

The pioneering GESTICA control system builds on the comprehensive performance of the SELOGICA system. Gestures and added assistance make operation even simpler and more intuitive.



The SELOGICA control system offers a whole range of functions for specialised technology – even non-standard sequences are handled as though they were standard.




# APPLICATIONS: IN PRACTICE

// The concept of our hybrid ALLROUNDERS is always an attractive alternative. Whether your needs are high precision and reproducibility or speed and dynamics, the performance characteristics of the machines comprehensively meet a multitude of injection moulding requirements. From high-output production, through mass-produced technical components, to thin-walled moulded parts, our HIDRIVE machines prove their reliability in everyday use. //

From automotive to medical:  
complete turnkey systems from  
a single source.



Mass-produced technical items:  
precise positioning of the toggle-type  
clamping unit speeds up part removal.

 Further information:  
turnkey projects brochure



Thin-walled items:  
reliable production with highly  
dynamic injection flow rate.



Ideal basis for packaging items:  
short dry cycle times of the  
servo-electric clamping unit.



High-output production:  
synchronous ejection enables  
even faster cycles.



**i** / Further information:  
application expertise brochure



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**WIR SIND DA.**