



HYBRID ALLROUNDERS

More power: efficient combination
of hydraulic and electric technology

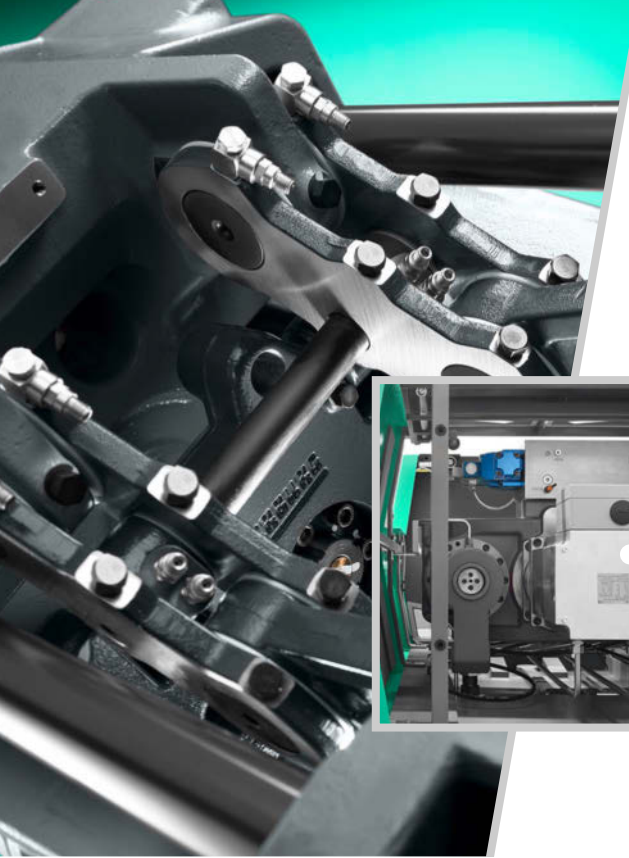
ARBURG

HIGH PERFORMANCE

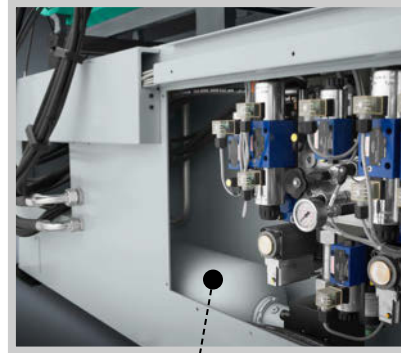
ALLROUNDER HIDRIVE:
Keeping unit costs under control.
through high performance.

"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.



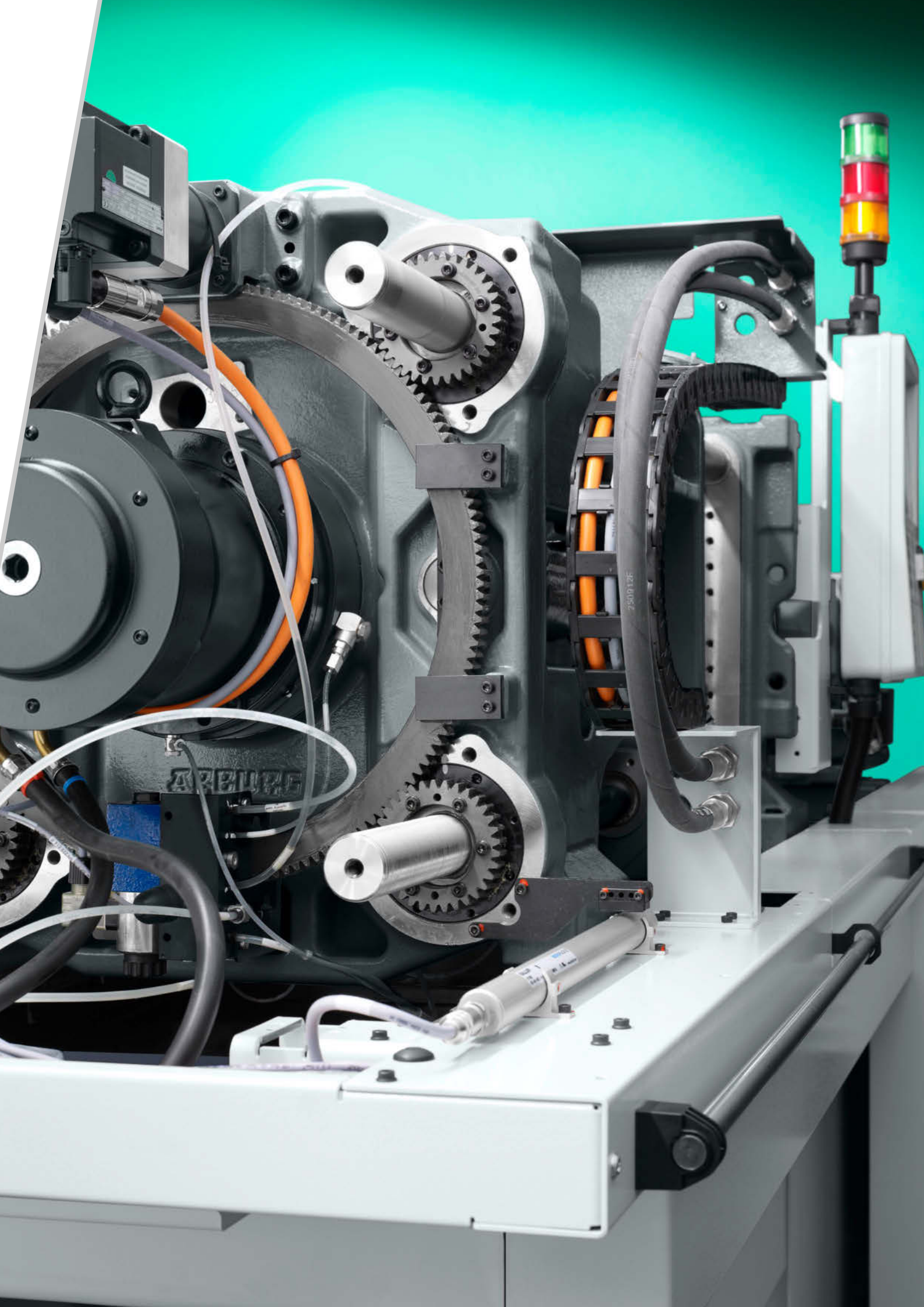
Hydraulic accumulator technology: the best basis for large, dynamic injection volume flows.


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 high flexibility of our modular design system, 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 percent reduced energy requirement





Ready for digitalisation:
ALLROUNDER 570 H to 1120 H
machines with a clamp design
are equipped with not only
connectivity modules, but also
assistance packages as standard.

Production capacity

The hybrid ALLROUNDER machine concept has been configured with the particular aim of achieving high production capacities. It brings together the servo-electric clamping units of the ALLROUNDER A and generously dimensioned injection units with hydraulic accumulator technology. All movement axes operate completely independently of one another.

Dynamics

As well as the servo-electric toggle, the hydraulic accumulator technology also reduces cycle times. This enables large, dynamic injection volume flows to be achieved. In addition, a position-regulated screw ensures maximum reproducibility and part quality.

Cycle time reduction

Simultaneous movements combined with extremely short dry cycle times of the servo-electric clamping units enable fast cycles. Special features such as "injection on the fly" while the mould is closing or dosage that takes place across several cycles are also available.

Cost-efficiency

The sophisticated hybrid ALLROUNDER technology is synonymous with reliable operation and maximum availability. In addition, technical detailed solutions minimise the set-up and maintenance effort. This also makes day-to-day production much more efficient.

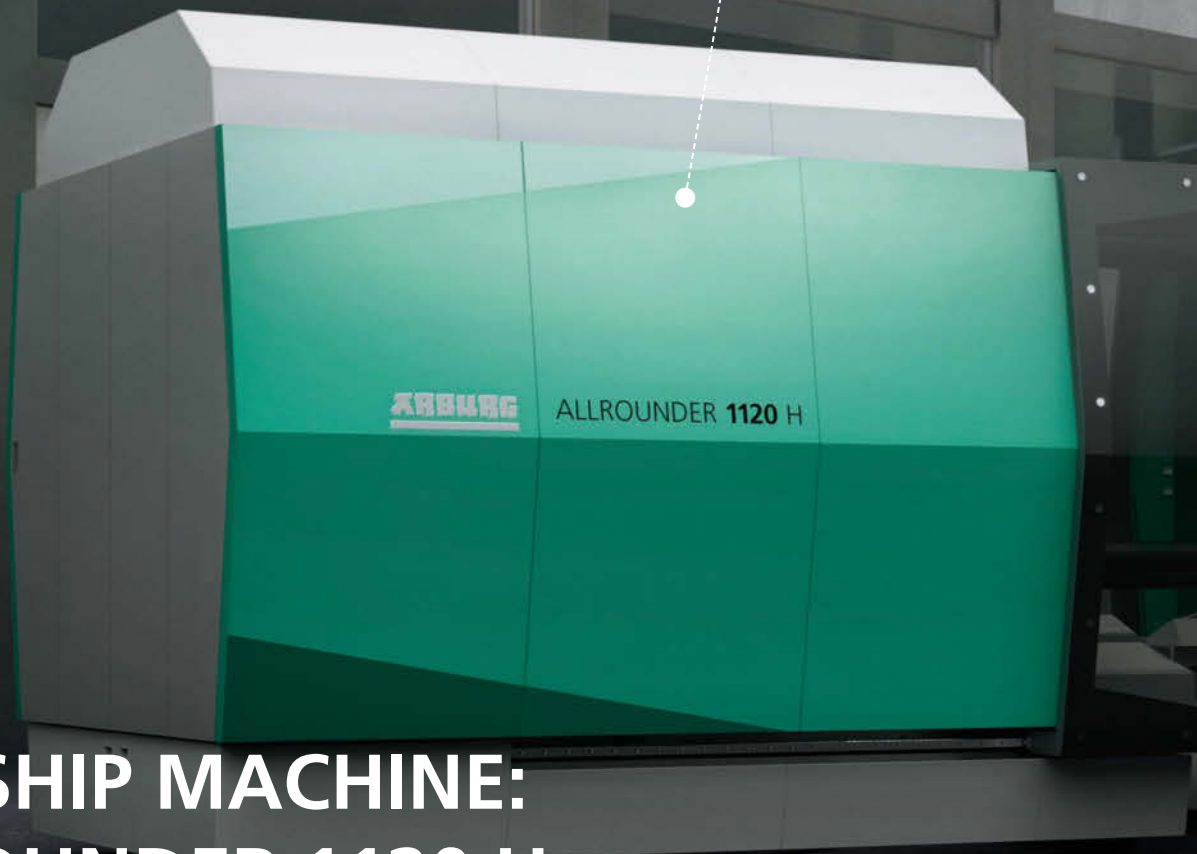
Energy optimisation

The servo-electric drives for mould movement and dosing as well as the recovery of braking energy to the network form the basis for high energy efficiency. Moreover, the hydraulic drive operates with a performance-adapted pump and an efficiency class IE3 electric motor.



Distance between tie bars:	270 - 1120 mm
Clamping forces:	350 – 6,500 kN
Injection units:	70 - 7000

Aesthetically pleasing and emotive:
who says efficient, high-quality machine
technology cannot also look good?



FLAGSHIP MACHINE: ALLROUNDER 1120 H

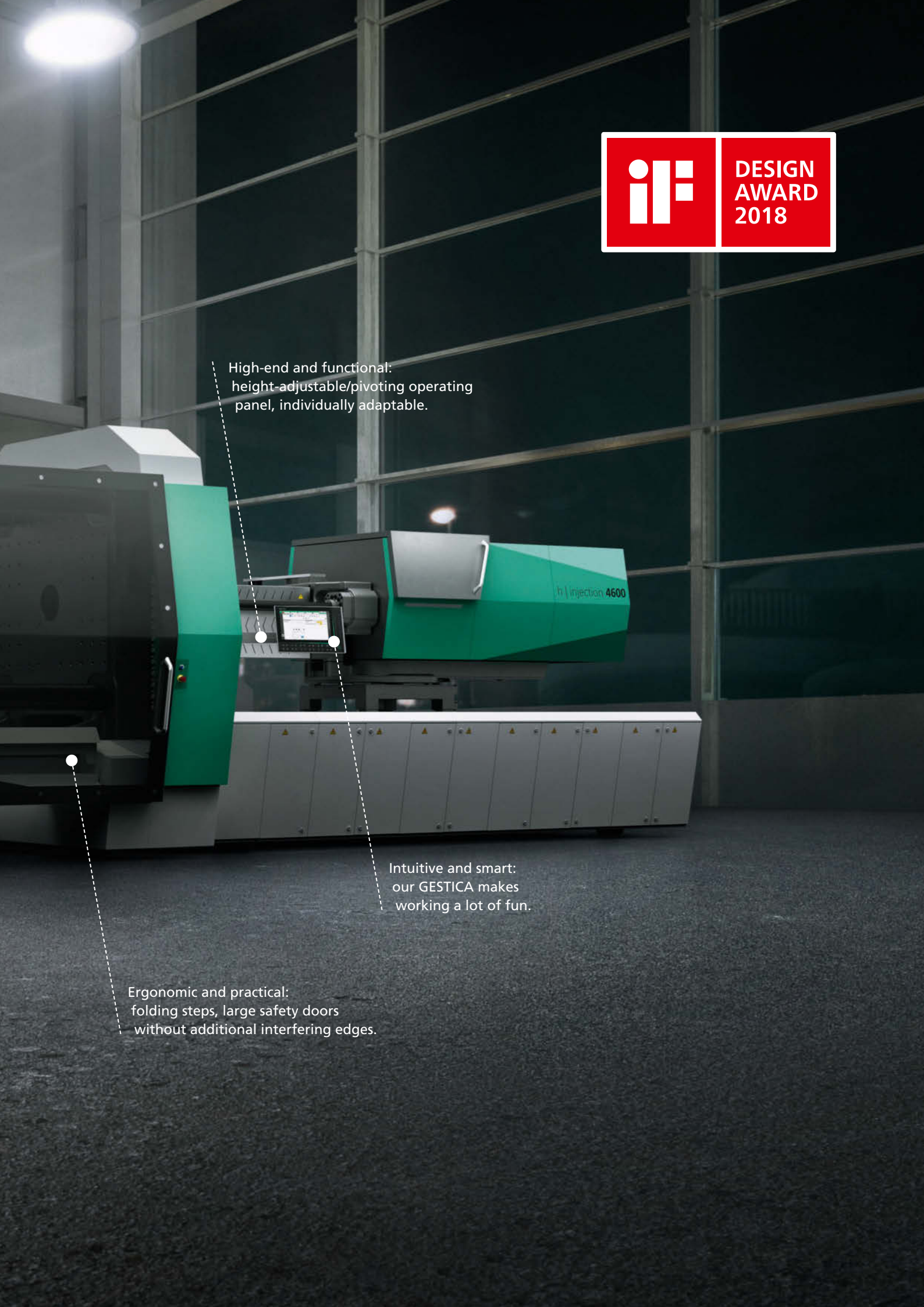
// From small to big: the targeted expansion of our product portfolio has led to the development of the hybrid ALLROUNDER 1120 H. This extends our performance range up to a clamping force of 6,500 kN. The machine design is the flagship for efficient, high-end technology. "Form follows function" - this principle is reflected in many useful features that make it easier for you to work. We have built exactly the large machine that you have requested from us. //



High-end and functional:
height-adjustable/pivoting operating
panel, individually adaptable.

Intuitive and smart:
our GESTICA makes
working a lot of fun.

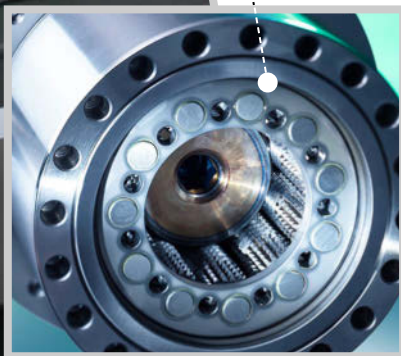
Ergonomic and practical:
folding steps, large safety doors
without additional interfering edges.



DRIVE TECHNOLOGY: ENERGY-OPTIMISED

// The sophisticated drive technology of the hybrid ALLROUNDERS forms the basis for the high degree of reliability and availability. Specially tailored to the achievement of high production capacities, our modular design combines electric speed and precision with hydraulic power and dynamics, combined to perfection! So with the HIDRIVE, you integrate machines into your production facility which not only operate particularly cost-effectively, but are also extremely energy efficient. //

Extremely robust and precise:
planetary roller screw drive
for the clamping unit.



Precision: reproducible
injection through valves
situated close to consumers.

Servo-electric drives

Mould opening and closing, as well as dosage are servo-electrically driven – energy-saving, high-precision and simultaneous movements included. The technical high-end solutions of this area:

- play-free power transmission via direct spindle gear units
- Liquid-cooled servo motors ensure smooth running, temperature stability and operational safety without air turbulence
- Closed cooling circuit for the motors and converters
- Recovery of braking energy

Adaptive hydraulic system

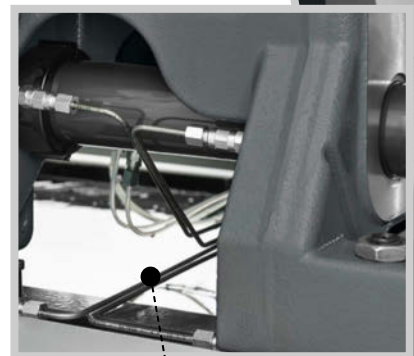
Injection and the secondary axes are hydraulically driven, while the ejectors and core pulls are also available in servo-electric versions. The hydraulic accumulator technology ensures precise, simultaneous, dynamic and fast machine movements. This technique becomes energy-efficient because the charging of the pressure accumulator is regulated, so that the pressure level automatically adapts to the current demand. The performance-adapted pump with IE3 motor also saves energy.

High availability

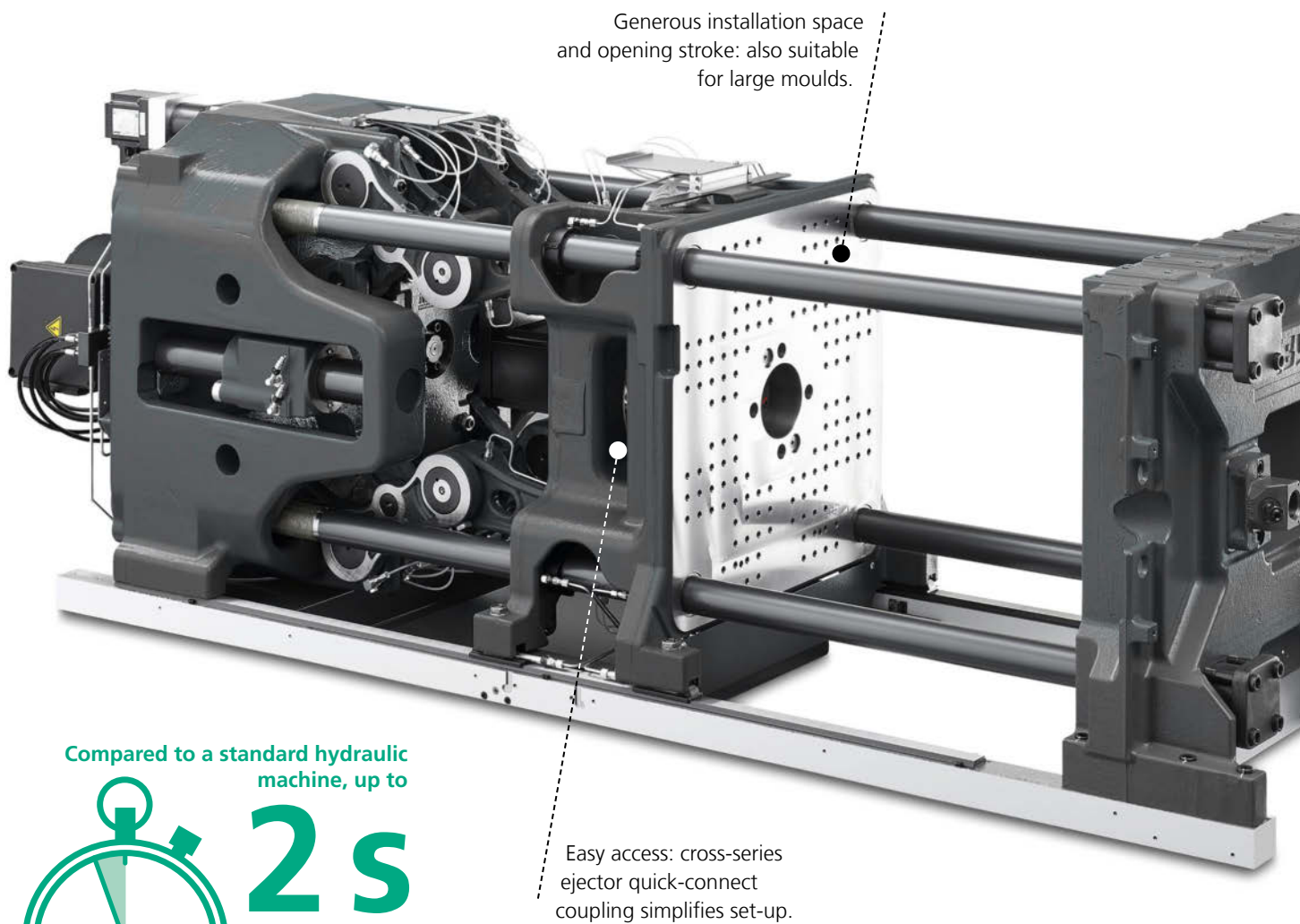
Our robust drive systems are the basis for long, stable, and fault-free running times. The automatic central oil lubrication system and the grease lubrication points that converge at a central point outside the panelling minimise the maintenance effort for the toggle-type clamping units. Because lubrication can take place during operation without interrupting production, availability is increased. Lubrication intervals are thereby calculated individually, depending on the forces, speeds, strokes, and times that have been set. This type of predictive maintenance saves operating time and minimises costs. All this means greater cost-effectiveness in day-to-day operation.

Compared to the hydraulic standard up to

40 %
ENERGY SAVING



Maintenance-friendly:
automatic central oil lubrication
of the clamping unit.



Compared to a standard hydraulic machine, up to



2 s
SHORTER
DRY CYCLE TIME

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

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 heart of our mechanically-rigid clamping system: The solid, highly-stable planetary roller screw drive. This enables us to assume all positions with a high degree of precision. This simplifies the transfer of parts to robotic systems.

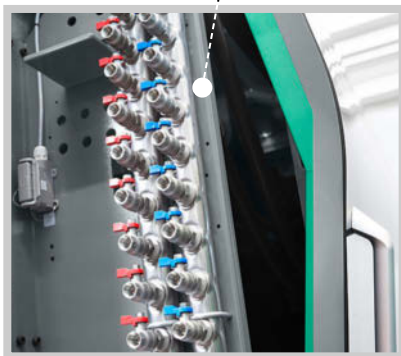
Clamping force control

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.



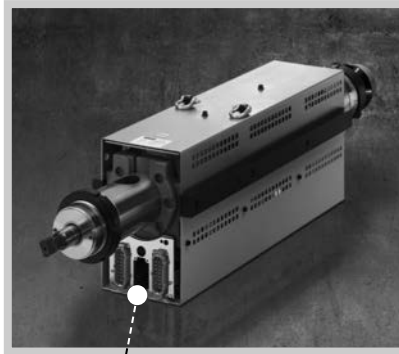
Servo-electric ejectors (optional): particularly precise dropping of moulded parts for even shorter cycle times.



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.



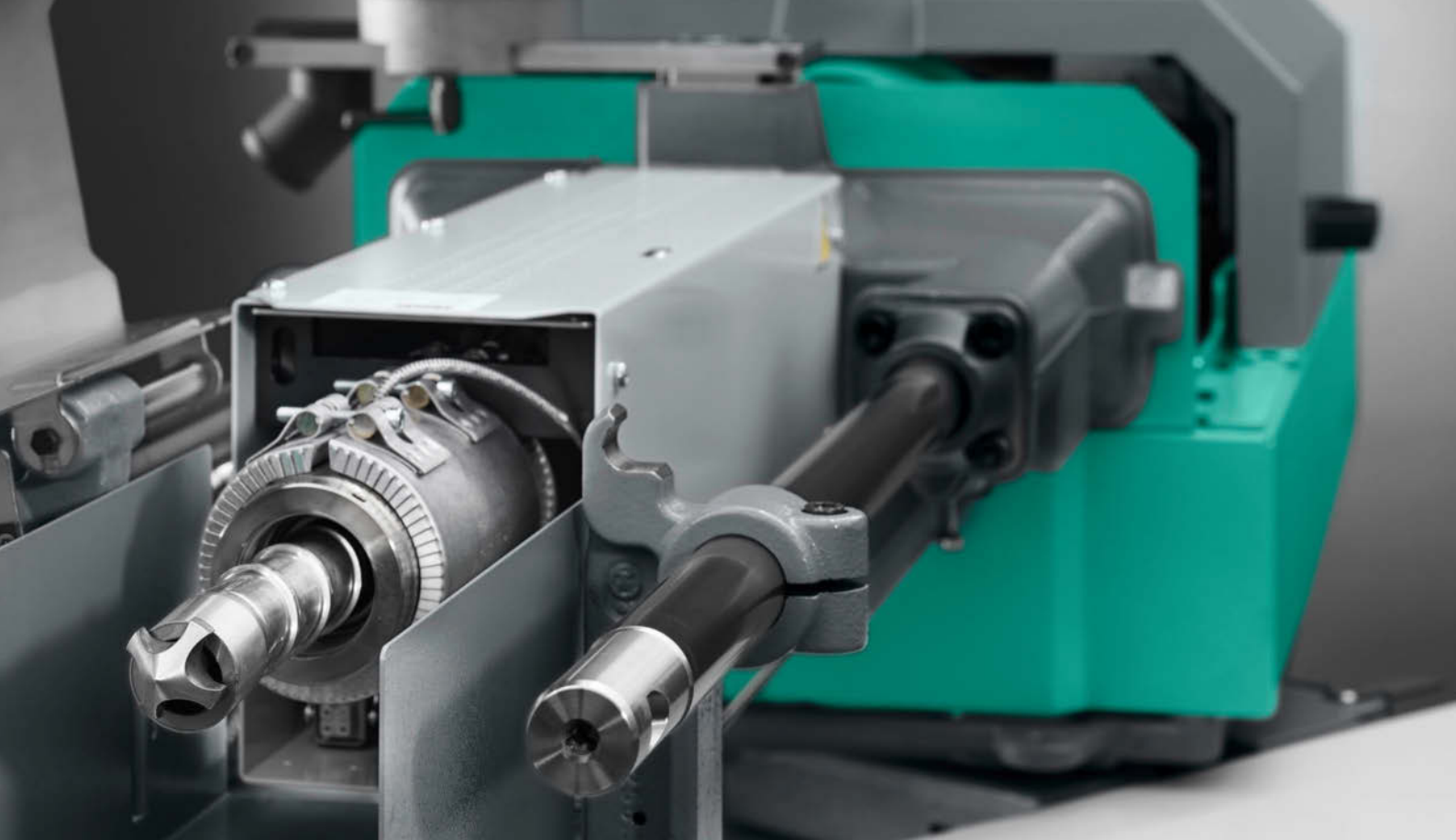
INJECTION UNITS: DYNAMIC

// Homogeneous material preparation and precise injection form the basis for high-quality part production. On our HIDRIVE, this is achieved through the combination of position-regulated screw, dynamic hydraulic accumulator technology and energy-saving servo-electric dosing drive. You maintain full control of your cycle times thanks to the dosage across cycles and the simultaneous nozzle movement. Another definite advantage for you: our injection units can be converted and cleaned quickly. //

**REPRODUCIBLE
MOULD FILLING**



through to a position-regulated screw – variations in 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.

Position-regulated screw

Precision control of injection pressure and speed with the position-regulated screw. Dynamic acceleration with hydraulic accumulator technology: our combination for reproducible mould filling and moulded part quality as well as high-level injection performance.

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:
SELOGICA and 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!

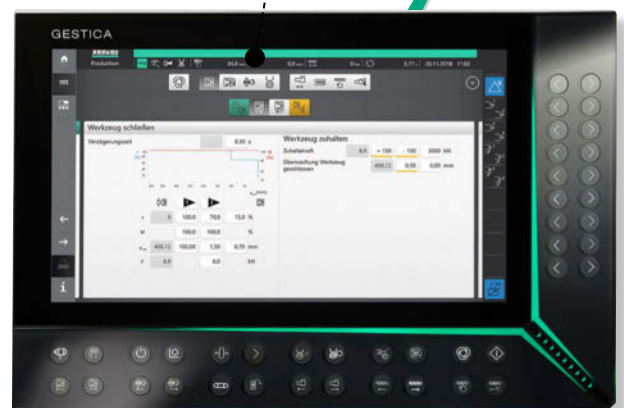
More efficient operation

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.



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