BlueTechnolution
Our objective is achieved when our solution generates the highest benefit for every aspect of your production process: injection moulding machines from Sumitomo (SHI) Demag provide an ideal combination of energy efficiency and productivity. This way, you minimise not only your cycle times and your resource consumption, but also your CO₂ footprint. Distinguished by its outstanding production and energy efficiency, the new Systec Servo series is a strategic advancement of the unique technological level that we already achieved as part of our future-oriented BlueTechnolution strategy.

Trust in technology
Performance, productivity and environmental protection are the cornerstones of Sumitomo (SHI) Demag’s product solutions. As our customer, you benefit from many years of experience with all injection moulding techniques and from our machines’ outstanding productivity.

Market and machine requirements
As a pioneer and innovative driving force in the injection moulding market, we have accumulated extensive intelligence on the requirements of different markets and industries. This way, we are able to optimise your production with the help of application-oriented and efficient machine solutions.
The IntElect all-electric injection moulding machine concept harnesses the synergy that was generated when Sumitomo and Demag joined forces. The IntElect series is the perfect blend of our best engineering solutions. The result: highly precise, dynamic and energy-efficient injection moulding machines that help you put your ideas into successful products.

As IntElect machines are equipped with all-electric drives, they provide the perfect solution for a variety of applications. Particularly during processes with frequent product changes, the IntElect demonstrates its impressive performance, which combines unparalleled versatility with maximum precision and repeatability. IntElect machines master even multi-component applications without a hitch.

**The IntElect was developed with decades of experience with electric machines – to your benefit!**

**Your technical advantage:**
- All-electric injection moulding machine with specially developed innovative high-torque direct drives
- activeDynamics guarantees maximum precision thanks to particularly fast response times and unparalleled repeatability
- activeFlowBalance and activeLock provide better safety and reliability for processes with extremely narrow tolerances
- Maximum energy efficiency
- Integrated hydraulic power unit with servo drive for fast nozzle movements and hydraulic interfaces

**Your economic advantage:**
- Higher output rates for more profits and fast ROI
- Lower investment costs for your production infrastructure

**Your benefit:**
- Outstanding production quality and higher output rates
- Economic production with significantly lower overheads
- Resource-efficient technologies
**IntElect**

Maximum-precision parts such as medical, electronic or micro-parts are a challenge for every machine. But thanks to their special concept, all-electric IntElect machines can easily handle these applications. Their tried-and-tested, innovative direct drives with their superior response times ensure highly accurate repeatability and maximum precision. Their outstanding efficiency is the product of their superior performance.

**IntElect with S package**

The IntElect with S package is the perfect machine for highly challenging technical components for the electronic, medical, automotive or packaging industry – with extremely narrow tolerances of only a few hundredths of a millimetre. This machine concept is distinguished by its outstandingly high level of precision, which is paired with maximum dynamics and an impressive reliability both in terms of quality and process stability. Equipped with the active-FlowBalance production efficiency module, these properties can be finely tuned, i.e. for multi-cavity applications.
**IntElect – all-electric and ultraprecise**

Operating with all-electric drives, IntElect injection moulding machines have an extremely low noise emission. Minimum scanning times ensure highly dynamic and precise process control. Your benefit: maximum control precision and repeatability paired with significantly lower noise emission. Equipped with the activeLock module – an adjustable non-return valve – IntElect machines can accommodate the extremely high precision levels required by particularly sensitive processes. Multi-cavity moulds will benefit from the activeFlowBalance module for automatic cavity balancing.

"Think green – act blue" is Sumitomo (SHI) Demag's motto for promoting technologies and living up to its responsibility for a better environment. As a result, machines from Sumitomo (SHI) Demag are distinguished by both their impressive production efficiency and by their high energy efficiency.
Automotive
The exacting quality requirements for complex functional components or delicate design elements used in the automotive industry can be met by injection moulding machines that deliver maximum performance during every phase of the process. These machines are also prerequisite for producing excellent results with multi-component and IMD applications.

Electronics
Injection moulding different wall-thicknesses and complicated geometries requires versatile high-performance machines. The IntElect produces complex high-quality plastic parts with minimum cycle times.

Specialist for many industries
Over many decades, we have accumulated extensive experience and intelligence on the requirements of different markets and industries. This way, we are able to support our customers with outstandingly efficient production solutions that generate long-term profit boosts and cost reductions.

Microparts
In order to perfectly process extremely small shot weights, material metering and injection processes need to be highly precise. The IntElect with its 14-mm screw, activeDynamics module and activeLock lockable non-return valve produces parts of maximum reproducible quality, even when processing standard pellets.

Medical
The IntElect with its emission-free direct drives is the ideal injection moulding machines for cleanrooms and production units with air shower. It guarantees highly precise production processes and the end-to-end quality documentation that is obligatory for medical products.
More efficient in every aspect

The fast track to profitability

Investment in the all-electric IntElect technology pays off quickly. You benefit from more production efficiency, significantly lower energy consumption and minimum downtimes. Energy costs may rise, but your production overheads will be reduced for the long term.

**Calculation example for identical runs**

<table>
<thead>
<tr>
<th></th>
<th>IntElect</th>
<th>Industrial standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy costs/a</td>
<td>6.200 €</td>
<td>58.500 €</td>
</tr>
<tr>
<td>Running costs /a**</td>
<td>58.500 €</td>
<td>2.500 €</td>
</tr>
<tr>
<td>Total maintenance, amortisation, salary and overhead costs</td>
<td>62.000 €</td>
<td>62.000 €</td>
</tr>
<tr>
<td>Investment costs</td>
<td>80.500 €</td>
<td>850.000* €</td>
</tr>
<tr>
<td></td>
<td>1.050.000* €</td>
<td>2.600 €</td>
</tr>
</tbody>
</table>

*Overheads in 15 years
including
6 % increase in energy costs
2 % salary increase

Cost savings ca. 200.000 €
activePowerLink
Minimum energy consumption – high forces and fast movements. Precise, fast and energy-efficient locking.

activeQ
Highly sensitive, active mould protection immediately detects even small errors across the entire closing stroke and reduces response times to a minimum.

activeGuide
Equipped with linear guidance of the moving platen as standard for maximum precision, less wear on the mould, lubricant-free tie bars and minimum energy consumption.

Intuitive NCS plus control
With process-oriented user interface for comfortable set-up, adjustment and documentation.
activeAdjust
Optimises cycle times thanks to customisable controller adjustment for ejectors, closing stroke and injection. For optimum dynamics and even machine movements.

Screw cylinder
With constant L/D ratio (20:1 or 25:1) for even melt quality and fast changeover of the screw cylinder.

Integrated hydraulic power unit
With servo drive for fast nozzle movements and hydraulic interfaces for maximum efficiency.
IntElect

Precise injection pressure measurement
Injection pressure is measured directly on the injection axis.

Dynamic and precise injection unit
With highly dynamic direct drive. Sumitomo specially developed the drives for injection moulding machines. All drives are air-cooled for lower water consumption and more efficiency.

Wide delivery chute, open on three sides
Open on three sides, the wide delivery chute is ideal for a flexible material flow and easy integration of ancillary components.
**Fast ejector**
Maximum performance thanks to specially developed ejector with intelligent ejector force monitoring for better mould protection.

**Dynamic and precise injection unit**
With direct drive and active energy recovery. Sumitomo specially developed the drives for injection moulding machines.
**ActivePlus: Intelligent solutions – maximum effect**

With IntElect machines, the dream of maximum efficiency becomes reality: the team of experts at Sumitomo (SHI) Demag have access to an extensive range of innovative, tried-and-tested technologies that help them tailor your Systec Servo to your specific application requirements. Because we all know: an investment in a new machine will only pay off if maximum output rate is paired with maximum efficiency in day-to-day operation.

---

**activePowerLink**

Low energy consumption for generating powerful forces and fast movements. Precise, fast and energy-efficient locking.

**activeFlowBalance**

Balances different pressure levels, for critical parts in multi-cavity moulds.

**activeRemote**

NC5 plus control user interface with visualised processes for intuitive operation of the machine and ancillary equipment.

**activeEcon**

Visualises and optimises process settings for minimising the machine’s energy consumption and production overheads.

**activeGuide**

Top part quality thanks to maximum platen parallelism and minimum wear on the mould.

**activeAdjust**

Individually adjustable axis control optimises cycles for better dynamics and precision.
Production efficiency activePlus

activeLock
Active locking action of the non-return valve boosts your production constancy.

activeQ
Sensitive, fast-response mould protection mechanism for maximum operation safety and minimum maintenance requirements.

activeDynamics
Servo card with integrated processor controls the interaction between drive, frequency converter and control system with the result of faster response times, up to twenty times faster than the industrial standard.

This is how you benefit from our production efficiency components
Equipped with numerous production efficiency components, Systec Servo outperforms the industrial standard on all levels. Sumitomo (SHI) Demag’s innovative drives provide significantly more capacity. Lower consumption costs and minimised maintenance requirements will generate sustainable savings.
NC5 plus: Everything under control

Intuitive user interface – your benefits

• Easy to use, straightforward NC5 plus user interface
• Undistracted screen layout, logical arrangement of soft keys and show/hide option for functions minimise set-up and optimisation times
• Easy input of an injection pressure profile and automatic purging of plasticised material after long downtimes minimises the risk of overfilling
• Extended process optimisation options: activeAdjust can be applied to every machine movement (clamping, switchover from injection to holding pressure)
• Active mould protection during mould opening and closing movements prevents mould damage: activeQ/activeQ+
• Saving a reference cycle with graphic target/actual status display provides transparent process analysis
• New functions with practical hard keys:
  - Automatic output and documentation of test components
  - Clamping unit control and reference position at the touch of a button
  - Automatic mould height and clamping force adjustment
  - Automatic purging for time-saving empty or start-up purging
Fast navigation with two-click strategy
• Every screen is no more than two clicks away
• Easy search function
• Logical arrangement into main and subgroups significantly speeds up all processes

Quick selection of favourites optimises navigation
• „activeKeys” for direct access to the five most frequently used screens
• Icons can be customised as required

User-friendly soft key structure
• Fast navigation via soft keys
• Functional groups with logically linked screen content

activeAdjust: Customisable setting options
• Slide controller for a wide functional variety
• Increase or reduction of mould movement dynamics
• Optimum individual setting for process and product

Injection pressure monitoring
• Injection pressure profile can be stored as a reference
• Monitoring of the reference profile with variable entry of tolerances
• Machine response can be adjusted via tolerance monitoring

Mould protection profile
• Graphical display of force profile
• Monitoring of reference profile limits forces during mould closure
• Two-step adjustment
• Adjustable start-up program
Although all data and information compiled in this brochure were selected with utmost care and diligence, we cannot accept liability for their accuracy. Some images and information may deviate from the actual delivery conditions.