Systec Servo – highly versatile
The Systec Servo combines many years of experience with hydraulic and electric drive technology

Your benefits at a glance:
- With its hybrid drive concept, Systec Servo with servo drives (activeDrive) is optimised for maximum output and energy efficiency and requires up to 60 % less energy than the industrial average recorded for hydraulic machines
- The integrated activeMotionControl drive technology guarantees high dynamics and precision
- Can be extended from serial to parallel axial movements
- The advanced NCS plus control allows simple and intuitive machine operation
- Productivity boost for higher profits and a fast ROI
- Low noise emission for pleasant working conditions
- Low investment costs for your production infrastructure thanks to resource-conserving technologies
- Maximum versatility accommodates specific customer requirements

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.

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.
Systec Servo: Maximum performance, outstanding efficiency
Systec Servo

Systec Servo provides maximum versatility for cycle times of more than ten seconds in the following segments: automotive, consumer and white goods. The rugged three-platen-machine is distinguished by maximum platen parallelism even when supporting high mould weights. Combined with activeMotionControl, the activeDrive servo-hydraulic drive unit ensures perfectly dynamic and precise processes. Thanks to cost-efficient and reliable production processes, this innovative machine offers a quick return on investment.

Numerous add-on options and production efficiency modules accommodate changing production conditions quickly and easily. A keen price/performance ratio and minimum energy consumption provide the perfect finish for this attractive package.

### Technical highlights:
- activeDrive for precise parallel movements and short cycle times
- Highly efficient and resource-preserving drive technology based on BlueTechnolution
- Electric high-torque direct drives for a high plasticisation capacity
- Highly sensitive mould protection for maximum reliability
- Numerous optimisation options for maximum efficiency and versatility thanks to high-capacity production efficiency modules

<table>
<thead>
<tr>
<th>Systec Servo</th>
<th>Clamping force [kN]</th>
<th>Distance between tie bars [mm]</th>
<th>Injection units</th>
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<tr>
<td>500</td>
<td>370 x 370</td>
<td>120 / 200 / 310</td>
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<td>4200</td>
<td>820 x 820</td>
<td>1450 / 2300 / 3300</td>
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</table>
Systec Servo: An innovative drive concept for high performance

activeDrive and activeMotionControl – An Invincible team

The hybrid drive concept activeDrive is a technological quantum leap in classic hydraulic drive technology. This system is requisite for those who are mindful of our planet, and injection moulding machines ought not to be delivered without it.

Not only does it protect the environment, it also significantly reduces production costs. Thanks to the very low noise emission, operators enjoy a quiet working environment. Equipped with activeDrive as a standard module, machines generate higher output rates due to faster axial movements and higher injection dynamics. This provides you with reliable conditions for future production changes.

Finely tuned to the machine’s hydraulic system, activeMotionControl works in combination with activeDrive to ensure a perfect axial control. As this allows parallel movements with only one hydraulic pump and without interaction between the individual movements, it significantly improves the overall precision of the process. The use of an optional servo injection valve is rendered superfluous for virtually all applications.

"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.
Systec Servo 50 – 120 t

**Fully hydraulic clamping system**

with two compact clamping cylinders for optimum application of clamping force. A stop valve ensures that the mould is safely locked, while the volume multiplier and the optimally adjusted variable capacity pump generate fast, precise movements.

**activeQ/Q+ (Q+ = optional)**

Highly sensitive active mould protection detects errors across the entire opening and closing stroke. Active deceleration of the clamping unit reduces response times to a minimum.

**activeGuide**

Linear guidance of the moving platen as a standard option for maximum precision, minimum wear on the mould and shorter cycle times.

**Intuitive NC5 plus control**

with process-oriented user interface for comfortable setting, monitoring and documenting.
**activeAdjust**

Individual controller adjustment for ejector, clamping movements and injection optimises the cycle. Ensures a smooth and balanced machine operation even under extreme conditions.

**activeMotionControl**

Finely tuned to the machine, this drive system reduces cycle and filling times while delivering a higher, reproducible part quality.
Systec Servo 50 – 120 t

**Control of all moving axes**
via NCS plus control. The stroke position is tracked by non-contact, wear-free ultrasonic position transducers.

**Cylinder screw with constant L/D ratio**
(20:1) for homogenous melt quality, even colouring and easy changes of the injection cylinder.

**activeDrive**
Higher dynamics, shorter cycle times and 60% less energy compared to standard drives – also available as a retrofit solution.

**activeCool&Clean**
Micro-fine oil filtration and oil change intervals after 40,000 operating hours ensure that the machine retains a high operational reliability.
Ergonomic configuration
of interfaces for moulds and ancillary
equipment accelerates or simplifies
production changes and mould
installation.

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.
Systec Servo 160 – 420 t

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

**Automatic tie bar puller**
makes room for installing even bulky moulds at the press of a button and allows lateral installation of moulds when hall ceilings are low (optional).

**activeGuide**
Linear guidance of the moving platen as a standard option for maximum precision, minimum wear on the mould and shorter cycle times.

**activeQ/Q+ (Q+ = optional)**
Highly sensitive active mould protection detects errors across the entire opening and closing stroke. Active deceleration of the clamping unit reduces response times to a minimum.
Intuitive NCS plus control
with process-oriented user interface for comfortable setting, monitoring and documenting.

**activeMotionControl**
Finely tuned to the machine, this drive system reduces cycle and filling times while producing a higher, reproducible part quality.

**Highly dynamic, energy-efficient injection control**
Standard equipment for virtually all applications.
Optional servo valve for extremely short filling times.

Highspeed-servo valve (optional)

activePowerLink
Control of all moving axes
via NCS plus control. The stroke position is tracked by non-contact, wear-free ultrasonic position transducers.

Injection unit guidance
Linear guidance for maximum precision.

activeCool&Clean
Micro-fine oil filtration and oil change intervals after 40,000 operating hours ensures that the machine retains a high operational reliability.

activeDrive
Higher dynamics, shorter cycle times and 60% less energy compared to standard drives – also available as a retrofit solution.
Screw cylinder with constant L/D ratio
(20:1) for homogenous melt quality, even colouring and easy changes of the injection cylinder.

Wide delivery chute, open on three sides
The wide delivery chute is ideal for flexible material flow and easy integration of ancillary components.
activePlus: Smart solutions for maximum effect
With Systec Servo 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.

activeCool&Clean
Extends the intervals between oil changes and significantly reduces wear on hydraulic parts.

activeAdjust
Individually adjustable axis control optimises cycles for better dynamics and precision.

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

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.
Production efficiency
activePlus

activeDrive
Higher dynamics, shorter cycle times and 60% less energy compared to standard drives.

activeQ/activeQ+ (Q+ = optional)
Sensitive, fast-response mould protection system for maximum operational reliability and minimum maintenance.

activeMotionControl
Finely tuned to the machine, this new drive system reduces cycle and filling times while producing a better, reproducible part quality.

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.
Intuitive user interface – your benefits
- Easy to use, straightforward NC5 plus user interface
- Uncluttered screen structure, 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
NC5 plus:
Everything under control

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
Our experts for consultancy and conception

The key to a steady increase in productivity is a solution-oriented approach right from the beginning. This process starts with a closer look at the produced parts and an assessment of the applied technology. Hand in hand with the customer, our experts will find the best solution to meet all production requirements. But that is not all: our customers benefit from solution-oriented planning, high investment protection and the strategic generation of competitive advantages achieved by a team of professionals with an extensive knowledge that goes well beyond technology.

» To be successful, you have to put your finger on the customer’s pulse, understand their business and provide them with tailor-made solutions. A professional approach is integral, specialised and focused. «
With one eye on the complete solution
Highly efficient and economic production concepts are the result of well thought-out complete solutions. Pre and postproduction equipment such as Sumitomo (SHI) Demag linear robots, intelligent multi-axis robotic systems and other tasks are accommodated with the help of a network of partners. Our experts make sure that everything runs smoothly.

Focus on the application – the beginning and the end of all solutions
When our application experts develop customised line concepts, they tap into their extensive process engineering knowledge and take into account all process-related factors. While each industry has its own requirements, they all have one common denominator: quality, because it determines the overall economy and resource consumption of every production process. Capital expenditure, production volume and consumption costs must be sustainable and in due proportion.
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