

*your choice*  
**SHIMA SEIKI**

EX



# SSG SERIES

Computerized Flat Knitting Machines



SSG122SV

SSG122SC

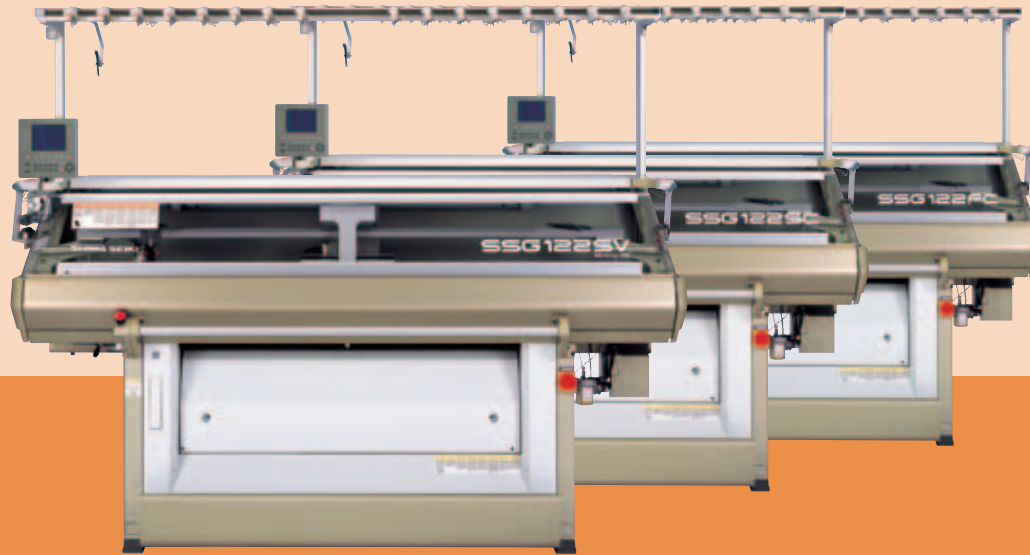
SSG122FC

# The Obvious Choice

Ever since our first SNC model was developed in 1978, we at Shima Seiki have been at the forefront of computerized knitting technology. Furthermore with the launch of our award-winning and best-selling SES® series in 1989, Shima Seiki has secured a major portion of the market share worldwide. It therefore comes as no surprise that Shima Seiki is considered the global standard in computerized flat knitting technology.

*The Obvious Choice*





## The New Global Standard

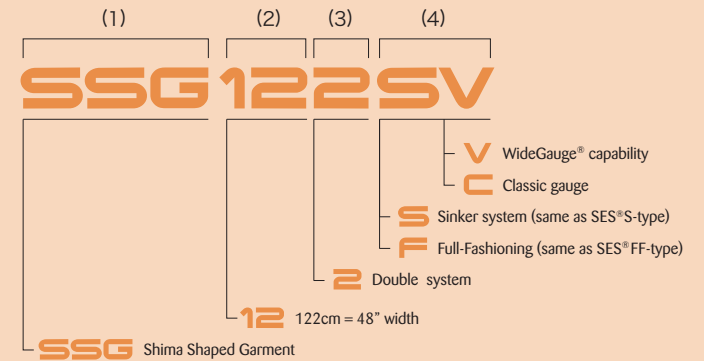
Shima Seiki announces a whole new global standard with the introduction of the SSG® series machines. Carrying over our greatest achievements in flat knitting technology from our SES® series, SSG® offers a blend of quality, productivity, user-friendliness and cost-performance that fulfills the high expectations already held by the global fashion industry.

## Nomenclature

How to “read” Shima Seiki knitting machine names. Shima Seiki’s knitting machine names consist of 4 sections:

- (1) Series Code
- (2) Knitting Width
- (3) Number of Knitting Systems
- (4) Machine Type

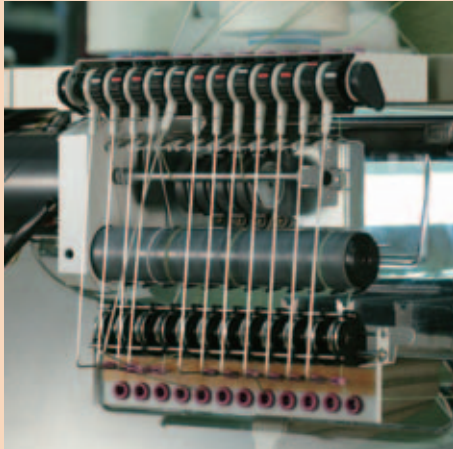
This system allows easy identification of SSG® and other models.



A close-up photograph of a digital knitting machine, showing the intricate mechanical components and the vertical needles. The lighting is warm and golden, highlighting the metallic surfaces and the fine details of the machine's structure. A semi-transparent horizontal band is overlaid across the upper portion of the image, containing the text.

Digital Knitting at its Best

*Digital Knitting at its Best*



### The World's First Digital Stitch Device

Considered one of the most significant breakthroughs in modern-day knitting, our patented Digital Stitch Control System (DSCS<sup>®</sup>) is the only proven digital system field-tested and market-proven in the industry for over 20 years. No other manufacturer can claim this kind of experience or level of refinement.

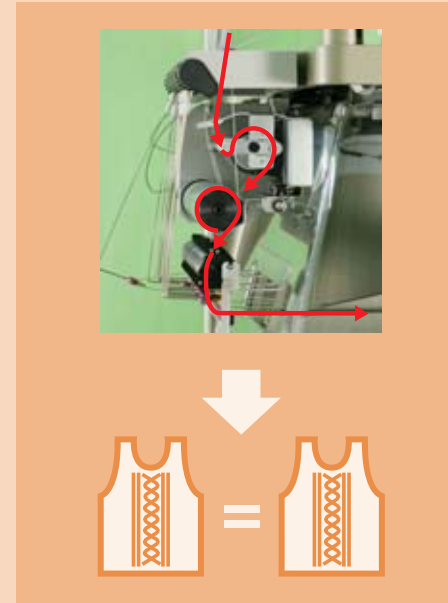


### Inconsistency Factors

Factors such as:

- Knitting speed;
- Yarn tension;
- Cone size;
- Batch difference; and
- Humidity

all contribute to variations in loop formation. Analog systems cannot keep up with the minute adjustments required against today's demands for high-speed knitting, resulting in inconsistent production quality.



### The DSCS<sup>®</sup> Encoder

Once the DSCS<sup>®</sup>-equipped machine is programmed with the desired loop length, it monitors yarn consumption continuously and adjusts yarn feed and tension to yield consistency throughout the fabric to within a remarkable  $\pm 1\%$  tolerance. The result is quality control that is essential to shaping and integral garment production.



Maximum Response

*Maximum Response*

# R2CARRIAGE<sup>®</sup>

RAPID RESPONSE CARRIAGE SYSTEM

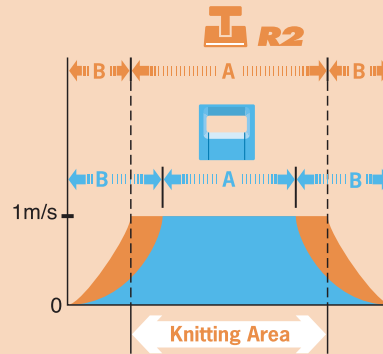
## Rapid Response R2Carriage<sup>®</sup>

SSG<sup>®</sup> features the new Shima Seiki R2 (Rapid Response) Carriage<sup>®</sup> System. By re-evaluating the entire carriage mechanism and software programming, maximum knitting speed increases over previous SES<sup>®</sup> models. More importantly, the R2Carriage<sup>®</sup> achieves quicker carriage returns after each course. Combined, these improvements result in an increase in productivity of over 10 per cent.



## Benefits of a Compact, Lightweight Carriage

The compact size and low mass of the R2Carriage<sup>®</sup> allow a lower moment of inertia and quicker carriage returns.

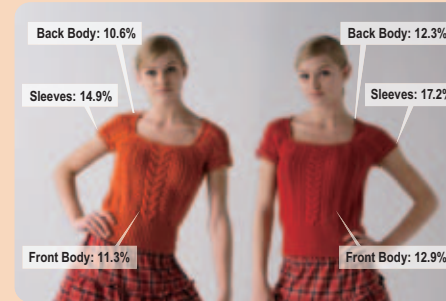


For a given knitting width, a larger and heavier carriage requires more space (B) at each end of the machine to decelerate, return and accelerate back up to speed, so the actual portion where the carriage runs at full speed (A) becomes very limited. With a compact, lightweight carriage, less space is required for the carriage to make returns, allowing more area for the carriage to run at full speed. This allows faster knitting per course, resulting in higher productivity.



## Typical Increases in Productivity

Significant increases in productivity can be seen throughout different portions of these garments.



Machine: SSG122SV 07G (@1.1m/s)

Knitting:	All-needle, 7G texture	Half-gauge, 5G texture
No. of Courses:	3470	2402
Knitting Time:	41:07	25:15
Average Savings:	11.9%	13.9%

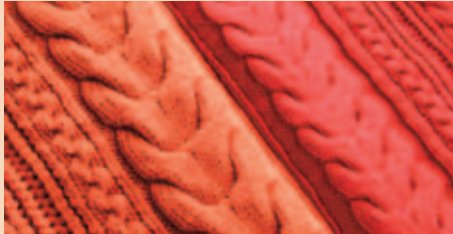
*A Machine for All Seasons*

A Machine for All Seasons

**WIDEGAUGE®**

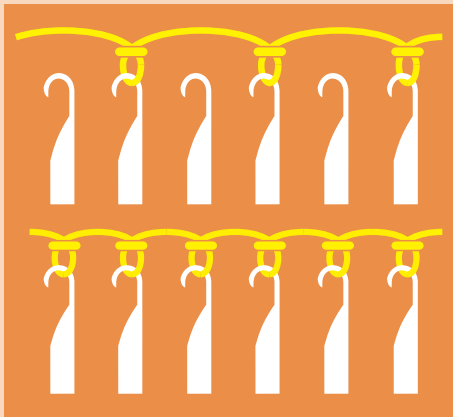


# WIDEGAUGE®

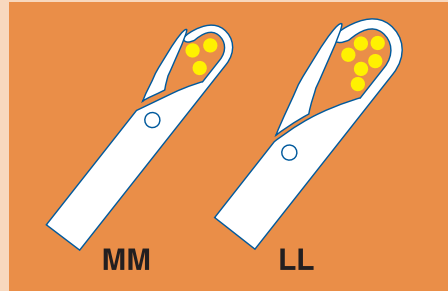


## WideGauge® Knitting

SSG®122SV features WideGauge® capability that allows a variety of gauges to be knit on a single machine. This allows the freedom to handle changing seasons and shifting trends without investing in a machine for every gauge or resorting to the complex, time-consuming task of gauge conversion



A wide range of production is possible, from tighter, finer-gauge fabrics using all-needle knitting to more airy, lower-gauge textures using half-gauge (1x1) knitting.



## Needle Hook Conversion

The SSG®122SV WideGauge® machine is available in 07G, 12G and 14G, with a choice of needle hooks. The MM Hook has a standard-size hook, while the special LL Hook features an oversized hook that allows thicker gauges or multiple ends for increased gauge range.



## Gaugeless Knitting

WideGauge® capable models can also perform Gaugeless Knitting, whereby an assortment of gauge sizes can be knit in a single garment for greater patterning possibilities.



# Quality Shaping

## Quality Shaping





### Yarn Gripper and Cutter System

Our unique yarn gripper and cutter system consists of two yarn grippers and one yarn cutter that work in precise coordination with each other. Since the gripper and cutter are separate units, they can be independently activated to delay cutting while holding, or perform holding alone. Safety features are also built-in, such as a finger guard and the use of specially configured safety blades.



### The Shima Seiki Takedown System

Shima Seiki's fabric takedown system features two sets of independently adjustable rollers and the takedown comb. The rollers provide quicker response times, permitting easier transfer especially for Aran and cable patterns. The patented takedown comb employs a fully-active row of setup needles. Their active release mechanism further offers complete, reliable, snag-free fabric release.



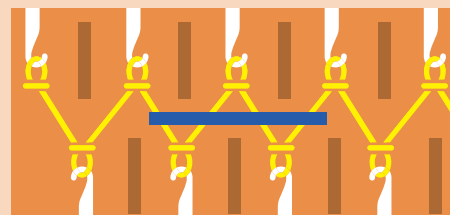
### Spring-Type Full-Sinker System

Spring-type sinkers operate full-time regardless of carriage position, and provide gentle holddown movement, realizing significant improvement in quality and texture for complicated three-dimensional fabrics.

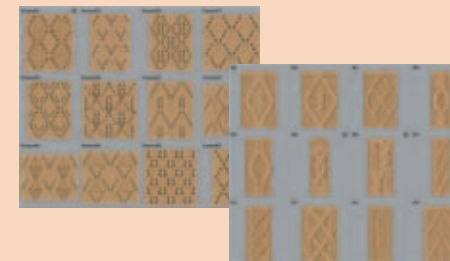


### Stitch Presser Technology

The patented stitch presser system features a special motor-driven system which allows the pressers to carry out individual on/off adjustments in both knit and transfer, in either course direction. These pressers are able to hold down fabric gently for improved consistency and control, contributing significantly to quality shaping.



Stitch Presser performs effective holddown while knitting ribs, when sinkers are otherwise ineffective.



### Design and Programming for SSG®

From yarn creation and knit fabric design to machine programming and even sales promotion, our All-in-One SDS®-ONE design workstation features everything needed to create quality shaped knitwear quickly and efficiently. Shima Seiki's unparalleled experience and know-how in the industry make SDS®-ONE the most advanced knit design system available.

# *User-Friendly Interface*

## User-Friendly Interface



The new control panel features a simple monochromatic LCD monitor with improved graphic interface for intuitive operation. The eye-level display offers improved ergonomics, while menu-interactive function buttons offer easy input and editing.





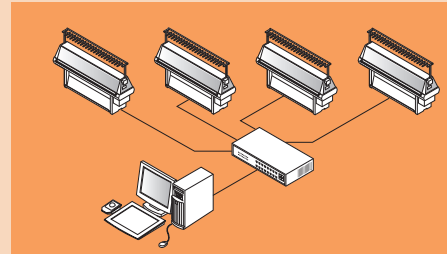
### All-New Built-In Controller

SSG® features a brand-new computer-control unit that is built-in to the knitting machine. Maintenance and periodical cleaning become more efficient, and shipping and installation requirements are simplified.



### USB Memory Input

The new controller accepts USB memory input to support large file sizes for increasingly complex patterns and designs. A second port is now available for supplementary connection with other USB devices as well.



### Shima Network Solutions

By networking multiple knitting machines with our SDS®-ONE design workstation, knitting data can be uploaded/downloaded and shared. Online production management can be used to gather important information about productivity for each individual machine. Shima Network Solutions can be customized according to your factory configuration, for up to a total of 240 machines in a single network.



### Backup Power Supply

A backup power supply allows work to resume after power failures, offering the peace of mind that an entire garment will not be lost due to blackouts. This is especially effective when knitting fine gauge items with high per-piece cost.



# Choice Selections

*Choice Selections*



SSG122SV 07G

SSG122SV 07G



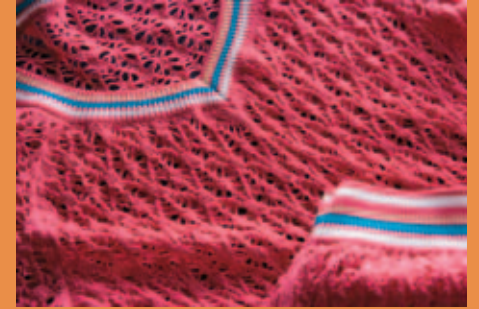
SSG122SV 07G



SSG122SV 07G



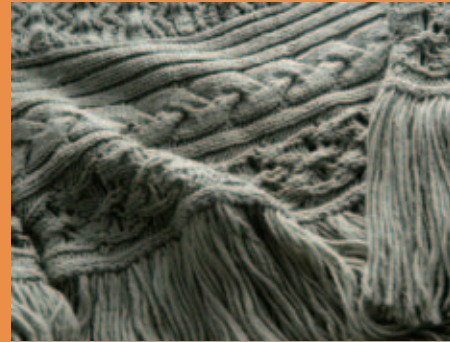
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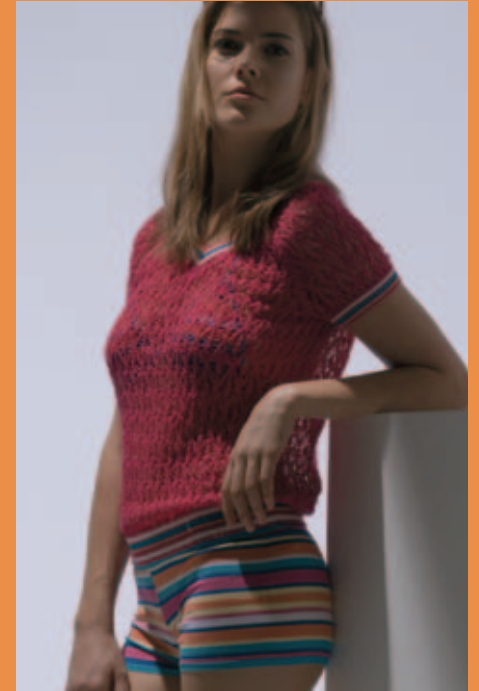
SSG122SV 07G



SSG122SV 07G



SSG122SV 07G



SSG122SV 07G



# *The Leader in Flat Knitting Technology*

## The Leader in Flat Knitting Technology



Shima Seiki's advanced research, development and manufacturing facilities cover over 150,000 sq. meters.



ology



### Proudly Made in Japan

From machining, microchip loading and product testing to final assembly, Shima Seiki's state-of-the-art equipment and skilled workers ensure product quality that is second-to-none.



### In-House Testing

All machine models undergo testing for electromagnetic immunity at our own EMC testing center. Shima Seiki's commitment to safety ensures compliance with the world's strictest safety standards.



### Getting the Basics Right

The needle bed is the most important part of the knitting machine. That's why at Shima Seiki, we take high-strength steel and place it through an advanced numerically-controlled machining process which yields a tough, precision-cut needle bed. We also use high-precision needle plates that provide durability at high speeds and protect the needle bed in the event of broken needles and jacks.



### High-Performance Needle Selection

SSG<sup>®</sup> machines feature simple, durable and economical latch needles that are motivated by special solenoid-type actuators developed and manufactured in-house by Shima Seiki. Rated as having the quickest response in the world, these actuators provide accurate, consistent and reliable needle selection.



### Thinking of You

Our new company slogan says it all: Choose Shima Seiki and you'll have the backing of the world's premier developer of computerized flat knitting technology. You can rest assured knowing that your choice is the right choice.

*your choice*  
**SHIMA SEIKI**

# More Reasons to Choose SSG

## *More Reasons to Choose SSG*

### **The Latest Trend Information**

Cooperation with knit fashion designers and consultants, as well as participation in various fashion trend events allow Shima Seiki to offer the latest trend information in a timely manner.



### The Communication Space

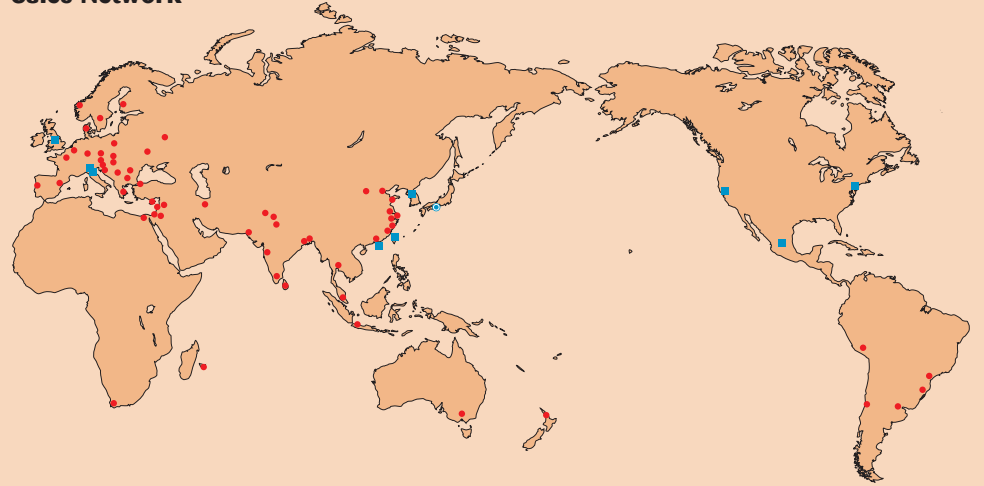
Showrooms at our Wakayama headquarters, Tokyo and Osaka branch offices, as well as our Design Centers in Milan and New York always have the latest samples on display, and provide opportunities for strategic meetings among designer, apparel merchandiser, yarn spinner and knit manufacturer.



### Training

Shima Seiki offers training courses at its headquarters in Japan, or at subsidiaries, branch offices and agencies worldwide.

### Sales Network



**Shima Seiki Europe, Ltd.**  
Sills Road, Willow Farm Business Park,  
Castle Donington, Derbyshire DE74 2US U.K.  
Tel: +44-1332-814770 Fax: +44-1332-850272

**Shima-Orsi S.p.A.**  
Via Redecesio 11, 20090 Redecesio Di Segrate, Milano, ITALY  
Tel: +39-02-216621 Fax: +39-02-2139410

**Shima Seiki Design Center of Milano**  
**Shimax Italia S.R.L.**  
Via Redecesio 11, 20090 Redecesio Di Segrate, Milano, ITALY  
Tel: +39-02-216621 Fax: +39-02-2139410

**Shima Seiki U.S.A., Inc.**  
22 Abeel Road, Monroe Twp., New Jersey 08831 U.S.A.  
Tel: +1-609-655-4788 Fax: +1-609-655-3989

**Shima Seiki Design Center of New York**  
501 7th Avenue Suite #412 New York, NY 10018, U.S.A.  
Tel: +1-212-391-4020 Fax: +1-212-391-4016

**Shima Seiki Mexico S.A. de C.V.**  
Vasco de Quiroga No.11, Moreleón, GTO. 38800 MEXICO  
Tel: +52-445-457-0698 Fax: +52-445-457-2492

**Shima Seiki Shanghai LTD.**  
No.866-102 Mao Tai Rd. Shanghai CHINA 200335  
TEL+86-21-3208-7070 FAX+86-21-3208-7775

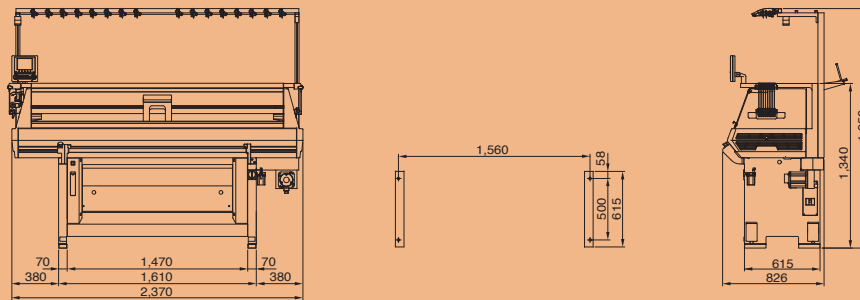
**Shima Seiki Win Win, Ltd.**  
11/F Glory Industrial Building, 22 Lee Chung Street,  
Chaiwan HONG KONG  
Tel: +852-2898-8339 Fax: +852-2558-8332

**SHIMA SEIKI KOREA INC.**  
337-6, Jangan 2-Dong,  
Dongdaemoon-Ku, Seoul KOREA 130-840  
Tel : +82-2-2216-4057 Fax : +82-2-2216-4711

**Shima Seiki Mfg., Ltd., Taipei Branch**  
1F, 30, Lane 583, Ruey Kuang Rd.,  
Neihu, Taipei 11492, TAIWAN  
Tel: +886-2-8752-3388 Fax: +886-2-8797-5522

For more information, please refer to the Sales Network section of the Shima Seiki Website : [www.shimaseiki.co.jp/network.html](http://www.shimaseiki.co.jp/network.html)

## DIMENSIONS



## Average Weight

SSG122 790kg (1,738lbs)

Actual weight is dependent upon gauge and optional equipment.

All dimensions are in millimeters.

## SPECIFICATIONS

Type	SSG®122SV	SSG®122SC	SSG®122FC
Gauge	7 · 12 · 14	7 · 12 · 14 · 16	16 · 18
Knitting width	Variable stroke. Max 48" (122cm)		
WideGauge®	Wide range of gauge knit on a single machine. —		
Knitting speed	Max 1.3m/sec. Knitting speed varies according to gauge and knitting condition. Variably adjustable speed levels. 10 additional programmable speeds.		
Stitch density	120 levels, electronically controlled.		
Racking	Motor-driven racking mechanism. Max 2-inch racking. 1/2 and 1/4 pitch also available from any position.		
Knitting system	Double KNITRAN® system. Single R2Carriage® system.		
Transfer	Simultaneous transfer, front or back, independent of carriage direction. Split stitch possible without exchanging yarn carriers.		
Sinker system	Spring-type moveable full-sinker system.		Fixed sinker system.
Stitch presser	Special motor-driven system allows individual adjustment for on/off in knit and transfer.		
Needle hook conversion	Conversion between LL-size and MM-size possible without exchanging cams. —		
Needle selection	Full jacquard selection via special solenoid actuators.		
Setup device	Takedown comb with special setup needles.		
Takedown device	Main/sub rollers. Changeable 99 levels, automatically adjustable on each level. Automatic opening and closing.		
Yarn cutter	Single-unit system includes 1 yarn cutter and 2 yarn grippers. Left side standard.		
DSCS®	Consistent loop length by digital control method. Left side standard.		
Left side yarn feed	8 positions (7G only: 10 positions)		8 positions
Side tensions	8 on each side (7G only: 12 on each side)		8 positions
Yarn carriers	9 normal carriers		
Top tensions	16 tension devices (7G only: 24 devices)		16 tension devices
Stop motion	One-touch easy threading. Lowered 100mm for easy access. Large knots cause machine stop. Small knots cause 0-9 courses at specified knot detection speed, then automatically resume at set speed.		
Drive system	Yarn break, large knot, wraparound check, shock detection, piece count, over-torque, program error, etc.		
Safety devices	Belt drive. AC servo motor. No lubrication necessary.		
Operation lamp	Full safety cover for noise-suppression and dust-proofing with stop motion sensor and interlock mechanism. Stop button. Power supply disconnecting device. Ultra-low speed "crawl" setting. CE Mark. Indicator lamps (see below).		
	Green/normal operation. Flashing green/normal stop. Flashing amber/abnormal stop.		

## CONTROLLER

Data input	USB memory interface. USB 3.5" MO disk interface. Ethernet 10/100BASE-T network interface.
Pattern memory	12,582,912 bits (1,024 wales × 4,096 addresses)
Control unit	Built-in controller. Stored program for flat knitting machine.
Control display	Monochrome LCD panel. Editing possible via display panel operation. Available in English, French, Italian, Spanish, Portuguese, German, Turkish, Russian, Chinese, Korean and Japanese.
Back-up power	Power supply for resuming knitting after power failure
Power	Single phase AC220V ±10% 1.8KVA

## Fully Fashioned High-Speed Knitting Machine

*your choice*  
**SHIMA SEIKI**

### SHIMA SEIKI MFG., LTD.

85 Sakata Wakayama Japan  
TEL+81-73-474-8210 FAX+81-73-474-8270

### SHIMA SEIKI EUROPE, LTD.

Sills Road, Willow Farm Business Park,  
Castle Donington, Derbyshire DE74 2US U.K.  
TEL +44-1332-814770 FAX +44-1332-850272

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Dongdaemoon-Ku, Seoul KOREA 130-840  
TEL +82-2-2216-4057 FAX +82-2-2216-4711

### SHIMA SEIKI MFG., LTD., TAIPEI BRANCH

1F, 30, Lane 583, Ruey Kuang Rd., Neihu, Taipei 11492, TAIWAN  
TEL +886-2-8752-3388 FAX +886-2-8797-5522

URL <http://www.shimaseiki.co.jp> Email [info@shimaseiki.co.jp](mailto:info@shimaseiki.co.jp)

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Shima Seiki maintains a policy of continuous improvement for its products, and therefore specifications and appearances are subject to change without notice.

Please contact your nearest authorized sales representative for the latest information.



## SAFETY NOTICE

In order to ensure safe operation of the equipment, please review all operation manuals carefully before use.

SSG SERIES

Printed in Japan