

SCG122SN

Computerized Flat Knitting Machine
with Coarse Gauge Capability

SHIMA SEIKI

The Specialty Machine for Ideal Coarse Gauge Knitting.

Over the years SHIMA SEIKI has supplied the world's knitting industry with specialized technology ideally suited to each application. Continuing that tradition is SCG®122SN available in 3 and 4 gauges. In addition to such priorities as speed, efficiency and consistent quality, market demand reveals that the computerization of traditionally hand-knitted low-gauge knitwear must place additional emphasis on fabric texture and feel. Incorporating SHIMA SEIKI's unique SlideNeedle™ the SCG®122SN 3 gauge can produce knitwear with robust, hand-crafted texture as low as 2 gauge. Optional Digital Stitch Control System with Intelligence and Dynamic Tension Control (i-DSCS + DTC®) assures extremely high quality and consistency even with difficult-to-knit fancy yarns. Furthermore a double racking mechanism provides better racking control in both directions for realizing bold and interesting designs while reducing total racking movement by half. For all this capability, productivity does not suffer, with higher knitting efficiency achieved through a narrower needle pitch and quicker carriage returns using the Rapid Response R2CARRIAGE® system. SCG®122SN also comes with a long list of useful features including the spring-type sinker, takedown comb, USB memory interface and backup power supply.



SlideNeedle™

The SlideNeedle™ features a special slider mechanism that effectively eliminates the transfer clip and allows the needle to be mounted in the center of the needle groove, thereby achieving perfectly symmetrical loop formation for knitting the highest possible quality fabrics. The SlideNeedle™ opens the door to possibilities never imagined before through superior transfer capability and brand-new knitting techniques.



Double Racking Mechanism

Using a special motor-driven mechanism, racking for transfer is performed by both front and rear beds simultaneously in two directions, reducing total racking movement by half. The shorter racking stroke permitted by this setup results in better racking control and knit capability. It also contributes to a more compact machine size.

Rapid Response R2CARRIAGE® System

The R2CARRIAGE® (R2= Rapid Response) System features an advanced carriage mechanism combined with improved software programming that achieves quicker carriage returns after each course.

R2CARRIAGE®
RAPID RESPONSE CARRIAGE SYSTEM

The World's First Digital Stitch Device

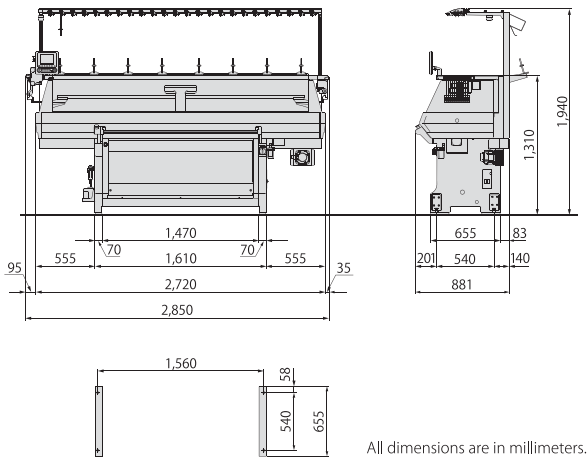
Considered one of the most significant breakthroughs in modern-day knitting, our patented Digital Stitch Control System (DSCS®) is the only proven digital system field-tested and market-proven in the industry for over 30 years. No other manufacturer can claim this kind of experience or level of refinement.

A User-Friendlier Knitting Machine

Space efficiency is improved during installation by integrating the fabric collection tray within the machine frame. The network connector is repositioned on the side of the machine for easier access while transferring comprehensive data using Shima KnitPLM®. The USB interface is also positioned directly below the control monitor for improved access in data exchange. For those moments when power suddenly becomes unavailable, a backup power supply allows work to resume after power failures. This offers peace of mind that an entire garment will not be lost due to blackouts.



SCG®122SN DIMENSIONS



All dimensions are in millimeters.

Average Weight

SCG®122SN 970kg (2,134 lbs.)

Actual weight is dependent upon gauge and optional equipment.

SPECIFICATIONS	
Trade Name	SCG122SN
Product	Computerized Jacquard Flat Knitting Machine
TYPE	SCG122SN
Gauge	3 · 4
Knitting width	Variable stroke, max 48" (121cm)
Knitting speed	Max 1.1m/sec. Knitting speed varies according to yarn, gauge and other knitting conditions. Speed can be programmed for 10 separate categories.
Stitch density	120 levels, electronically controlled.
Racking	Motor-driven. Double racking. Max 5-pitch racking to each side (10-pitch total) for front and rear needlebeds (4G: 6-pitch racking to each side, 12-pitch total). 1/2 and 1/4 pitch also available from any position.
Knitting system	Double KNITRAN® system, single carriage (R2CARRIAGE® system).
SlideNeedle™	Two-piece slider mechanism enables complex transfers. Mounted in the center of needle groove to yield perfectly symmetrical loop formation for knitting the highest possible quality fabrics.
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. Provides gentle holddown instead of forcibly pressing down yarn.
Yarn guide	Moveable yarn guides
Stitch presser	Special motor-drive. On/off adjustment. Press-down amount can also be set according to knit, transfer, etc.
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 upon command.
Yarn cutter	Single-unit system includes 1 yarn cutter and 2 yarn grippers. Left side standard. ⁽¹⁾
DSCS®	Consistent loop length by digital control method. 4 encoders. Left side standard.
i-DSCS + DTC®(2)	DSCS® with Intelligence + Dynamic Tension Control. Actively controls yarn feed in both feed and retrieval directions. Electronic control of yarn-feed tension permits high-speed knitting. 3 units, on right side.
Yarn feed roller	8 positions on both sides standard. Left side double roller standard.
Yarn stopper device	8 positions on left side
Side tensions	12 on each side
Yarn carriers	9 normal carriers ⁽³⁾
Top tension	24 units. One-touch easy threading. Large knots cause machine stop. Small knots cause 0-9 courses at specified knot detection speed, then automatically resume at set speed.
Stop motion	Yarn break, large knot, fabric pileup, shock detection, piece count, over-torque, program error, etc.
Drive system	Belt drive. AC servo motor. No lubrication necessary.
Cleaner	Special blower operated cleaner
Safety devices	Full cover for noise-suppression and dust-proofing with stop motion sensor and interlock mechanism. Emergency stop switch. Emergency power off device. Ultra-low speed "crawl" setting. CE Mark. Operation lamp (see below).
Operation lamp	Green/normal operation. Flashing green/normal stop. Flashing amber/abnormal stop.
CONTROLLER	
Data input	USB memory interface. Ethernet 10/100 BASE-T network interface.
Pattern memory	25,165,824 bits (1,024 wales x 8,192 addresses)
Control unit	Built-in controller. Stored program for flat knitting machine.
Control display	Monochrome LCD panel. Editing possible via display panel operation. Help/Message function (for cleaning and lubrication). Available in English, French, Italian, Spanish, Portuguese, Turkish, Arabic, Russian, Chinese, Korean and Japanese.
Back-up power	Power supply for resuming knitting after power failure.
Power	Single phase AC220V/230V (200V-250V). 2.0kVA (0.9-1.2kW: Power consumption varies according to gauge and knitting condition).

OPTIONS: (1) Right side yarn cutter (2) i-DSCS+DTC® (3) Intarsia device

SHIMA SEIKI

SHIMA SEIKI MFG., LTD.

85 Sakata Wakayama, 641-8511 JAPAN
TEL +81-73-474-8210 FAX +81-73-474-8270

www.shimaseiki.com

Website



Global Network



Fully Fashioned High Speed Knitting Machine

ISO14001 Certification: SHIMA SEIKI Headquarters is certified as an ISO14001 accredited company.

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SAFETY NOTICE

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