

New SES122FF/124FF



Computerized Flat Knitting Machine with Ultrafine Gauge Capability



SHIMA SEIKI

New SES122FF/124FF

THE REFERENCE STANDARDS IN COMPUTERIZED FLATBED KNITTING.

The compact, space-saving NewSES122FF double-system and NewSES124FF four-system machines have rebuilt the foundation for Shima Seiki's popular line of SES-series computerized flatbed knitting machines. From a compact and ultra-lightweight belt-driven carriage to a single-unit cutting system consisting of two yarn grippers and a cutter, they continue the Shima tradition of providing the latest in computerized knitting technology. Both models are capable of a full range of production, including shaping and integral garment production in a variety of patterns. Both machines also feature ultrafine gauge capability up to 18 gauge, providing new opportunities for soft, lightweight products which expand knitwear's potential as an all-season garment. And now, with the revamped NewSES line comes increased memory capacity, a user-friendly control panel with improved interface and higher productivity across the board.



Knitting
Width



Knitran® Systems



Ultra-
Lightweight
Carriage



Tandem
Operation



Belt-Drive
Operation



Tough
Needle Bed



Gauge Range



Gauge
Conversion



Solenoid
Needle
Selection



Compound
Needles



Stitch
Presser

All-new controller and LCD monitor

The NewSES series line-up features a brand-new computer-control unit with a significant increase in memory capacity. The NewSES controller boasts 50% more capacity as compared with the previous SES line, at 12,582,912 bits or 1,024

wales \times 4,096 addresses. In addition to floppy disks, the new controller can accept USB memory input, further increasing data capacity for knitting complex knits. Also standard is a network interface which opens up new possibilities in filesharing and production

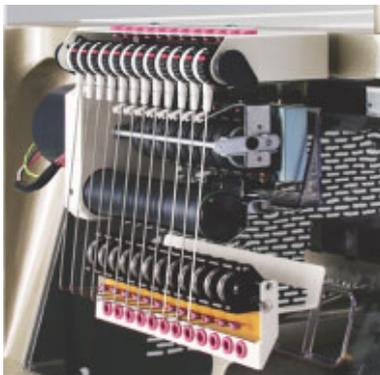
management using Shima Network Solutions. A backup power supply is also standard, allowing work to resume after power failures. The new control panel features a simple monochromatic LCD monitor with an improved graphic interface for intuitive operation. The eye-level display offers improved ergonomics, while menu-interactive function buttons offer easy input and editing. The menu also features multi-lingual capability, available in 10 languages.

The world's first digital stitch device

Considered one of the most significant breakthroughs in flatbed knitting technology, our patented Digital Stitch Control System (DSCS[®]), the first of its kind, treats each stitch as digital data. Once a specific loop length is programmed, it continuously adjusts yarn feed and tension to yield consistency in every loop of each

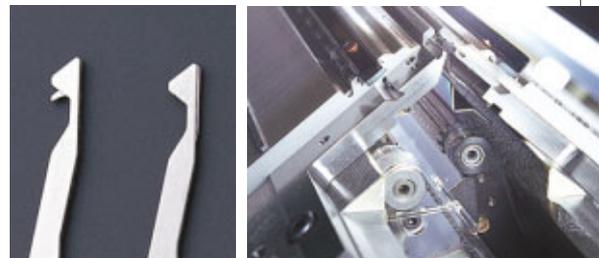
course, with tolerance to within a remarkable $\pm 1\%$.

The result is quality control capability that is virtually impossible with conventional analog systems. DSCS[®] is a crucial factor in full-fashioning and integral garment production, as well as for maintaining consistency among different batches and repeat orders.



A smooth and reliable takedown system

Otherwise known as the takedown comb, Shima Seiki's patented setup device employs a row of special setup needles which provide even takedown for consistent fabric quality. These unique needles furthermore feature a special release mechanism which offers complete, reliable, snag-free fabric release. In addition, there are two sets of takedown rollers which provide smooth and even takedown and optimum control. These quality control characteristics of the various takedown mechanisms make essential contributions to the production of fully fashioned and integral garments.



Unique gripper and cutter system

Another vital element to quality shaping and integral knitting is the capability to hold and cut yarn at will, which is realized by the yarn gripper and cutter. This single-unit cutting system, based directly on proven technology found in Shima Seiki's glove knitting machines, consists of two yarn grippers and one yarn cutter which work in precise coordination with each other. The NewSES122FF comes standard with one cutting system, with a second unit available as an option for even higher productivity. Two cutting systems are standard on the NewSES124FF. Safety features are also built-in, such as a finger guard and the use of specially configured safety blades.



Yarn Gripper/
Cutter



Digital
Knitting



Setup
Device



Takedown
Rollers



Dust
Cleaner



Schedule
Knit



Back-Lit
LCD Panel



Network
Interface



Pattern
Memory

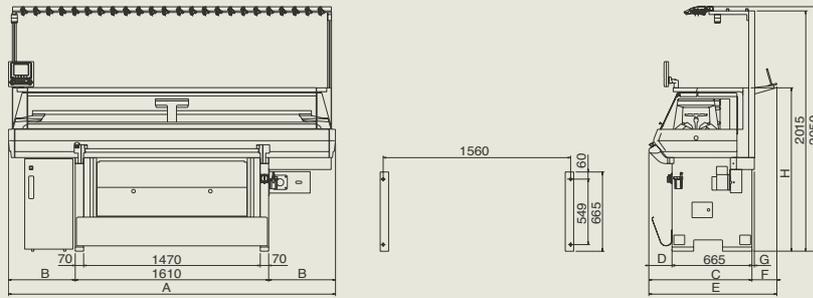


USB
Memory
Interface



Back-up
Power

DIMENSIONS



Average Weight

| | |
|-------------|---------------------|
| NewSES122FF | 1,050kg (2,310 lb.) |
| NewSES124FF | 1,240kg (2,728 lb.) |

Actual weight is dependent upon gauge and optional equipment.

| | A | B | C | D | E | F | G | H |
|----------------------|-------|-----|-----|-----|-------|-----|----|-------|
| NewSES122FF 3&4G | 2,720 | 555 | 858 | 193 | 1,065 | 207 | 20 | 1,370 |
| NewSES122FF 5-18G | 2,370 | 380 | 832 | 167 | 1,020 | 188 | - | 1,360 |
| NewSES124FF | 3,090 | 740 | 832 | 167 | - | - | - | 1,360 |

All dimensions are in millimeters.

SPECIFICATIONS

* By special order only.

| Type | NewSES122FF | NewSES124FF |
|-----------------------------|--|--|
| Knitting width | Variable stroke. Max 48" (122cm) | |
| Tandem width | — | 16" (41cm) × 2 |
| Gauge | 3 · 4* · 5 · 6 · 7 · 8 · 10 · 12 · 14 · 16 · 18 | 14* · 16* · 18* |
| Knitting speed | Max 1.2m/sec (NewSES122FF3G~5G : Max 1.1m/sec). Knitting speed varies according to gauge and knitting condition. Variably adjustable speed levels. 10 additional programmable speeds. | |
| Stitch density | 60 levels, electronically controlled. | |
| Racking | Motor-driven racking mechanism. 3&5G : Max 10-pitch racking. 1/2 and 1/4 pitch also available from any position. 4G : Max 12-pitch racking. 1/2 and 1/4 pitch also available from any position. 6-14G : Max 2-inch racking. 1/2 and 1/4 pitch also available from any position. 16&18G : Max 2-inch racking. 1/2 pitch also available from any position. | |
| Knitting system | Double KNITRAN® system. Single carriage. | Double KNITRAN® system. Twin carriage. |
| Transfer | Simultaneous transfer, front or back, independent of carriage direction. Split stitch. | |
| Stitch presser | Special motor-driven system allows individual adjustment for on/off in knit and transfer. | |
| Sinker system | Moveable sinker (3-5G only) | — |
| Needle selection | Full jacquard selection via special solenoid actuators. | |
| Setup device | Takedown comb with special setup needles. | |
| Takedown device | Main/sub rollers. Changeable 31 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 only ¹ | Both sides |
| DSCS® | Consistent loop length by digital control method. Left side standard. Left side yarn feed roller standard. ² Yarn feed: 8 positions. | |
| Side tension | 8 on each side ³ (3-5G : 12 on each side) | 12 on each side |
| Yarn carriers ⁴ | 9 carriers | 12 carriers |
| Top tensions | 16 tension devices ³ (3-5G : 24 tension devices) | 24 tension devices |
| | 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, wraparound check, 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 ⁵ | 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. Indicator lamps (see below). | |
| Operation lamp | Green/normal operation. Flashing green/normal stop. Flashing amber/abnormal stop. | |

CONTROLLER

| | | |
|-----------------|--|--------|
| Data input | 3.5" floppy disk. USB memory interface. Ethernet 10/100 BASE-T network. | |
| Pattern memory | 12,582,912 bits (1,024 wales × 4,096 addresses) | |
| Control system | 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, Chinese, Korean and Japanese. | |
| Back-up Power | Power supply for resuming knitting after power failure. | |
| Power | 3 phase AC200V ± 10% | |
| | 2.0KVA | 2.5KVA |

OPTION : (1) Right side yarn cutter. NewSES122FF only. (2) Right side yarn feed roller. (3) Additional tension devices (for a total of 24 top tensions and 12 side tensions on each side). NewSES122FF6 ~18G only. (4) Intarsia device. (5) CE Mark.



SAFETY NOTICE

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

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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.



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