your choice
SHIMA SEIKI

NewSFG

Automatic Ultrafine Gauge Seamless Glove Flat Knitting Machine

SFG

Automatic Seamless Glove Flat Knitting Machine

SPG

Automatic Seamless Pile Glove Flat Knitting Machine

SPF-W

Fully Automatic Sock Flat Knitting Machine

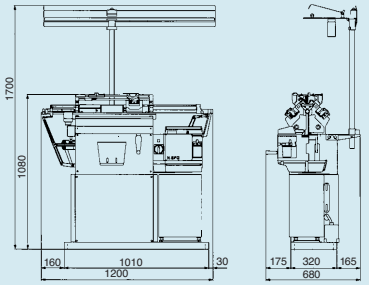
THE ULTRAFINE GAUGE SEAMLESS GLOVE MACHINE THAT KEEPS EVOLVING.

Shima Seiki's NewSFG computerized seamless glove machine has gained a large following with users worldwide, thanks to its quality, reliability and unparalleled technology developed especially for fine and ultrafine gauge applications. In addition to its already impressive lineup of 10, 13 and 15 gauges, the NewSFG has now evolved to include an 18 gauge machine. The NewSFG's proven sinker system and yarn insertion device carry on the tradition of producing seamless gloves which conform better to the shape of hands with smoother rounded fingertips. These quality production benefits, combined with the precision engineering required for ultrafine gauge knitting, can produce gloves with a natural and comfortable fit that is perfect for high-precision work, medical applications, and coated gloves.

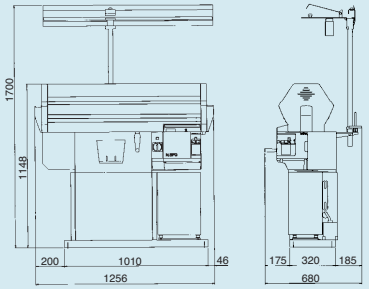
NewSFG

Automatic Ultrafine Gauge Seamless Glove Flat Knitting Machine

■ Standard version



■ CE version



All dimensions are in millimeters.

Average Weight

Standard version	260kg (572 lb.)
CE version	284kg (625 lb.)

Actual weight is dependent upon gauge and optional equipment.

SPECIFICATIONS

Model	NewSFG							
Gauge	10	10D*	13	13D*	15	15D*	18	18D*
Size (in needles)	L2: 68 L: 63 M: 58 S: 53	M: 60	L3: Front: 89 Rear: 88 L2: Front: 84 Rear: 83 L: 78 M: 73 S: 68	M: 74	L2: 103 L: 93 M: 83 S: 73	M: 83	L2: 123 L: 113 M: 103 S: 93	M: 103
Maximum speed range	Finger: 260~280rpm Palm: 123~140rpm (18G: 123~135rpm)							
Stitch density	Stepping motor (front and back level settings), 56 levels							
Drive	Crank system							
Knitting system	Sinker knitting system							
Lubrication	Centralized lubrication system; computer-controlled lubrication system							
Motor	4P inverter motor, 3 phase AC200V 180W							
Stop motion	Yarn break, overload, delivery, elastic yarn break, direction error, low battery, total piece count, etc.							
Controller	Control drum and electronic programming							
Interface	LED display and keypad input							
Power	3-phase AC200/220V ±10% 620VA (18G: Single-phase: 700VA, 3-phase: 620VA)							
Options †Not available on D-Type	Full safety cover (standard on CE version) Plating yarn feeder Plating yarn feeder control device† Size changing device† Turn glove† 3 finger palm device† CE Mark i-DSCS† 2 color device 3 color device†							
	Open finger device† Area sensor						—	
	6 color knotter				—			
	High-performance fiber device	—						

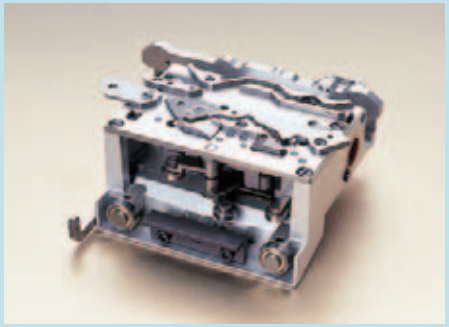
*D-type: for 5-toe socks

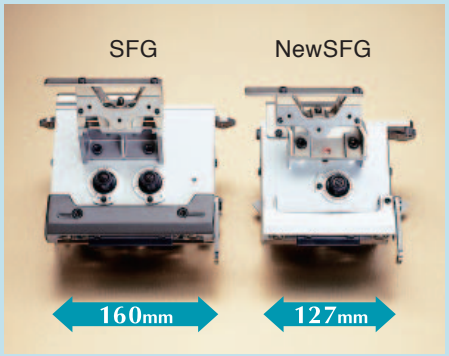
The World's First Ultrafine Gauge Gloves

The NewSFG features the world's first application of 18G ultrafine gauge glove knitting. 18G gloves offer a fit and feel equivalent to that of bare hands, giving new meaning to the term "fits like a glove." Round and seamless, snug-fitting fingertips make them perfect for applications that require high manual precision including medical, technical and assembly work. Very tight stitches between the fingers also make them suited for use as coated turn gloves.

Ultra-Compact and Lightweight Carriage

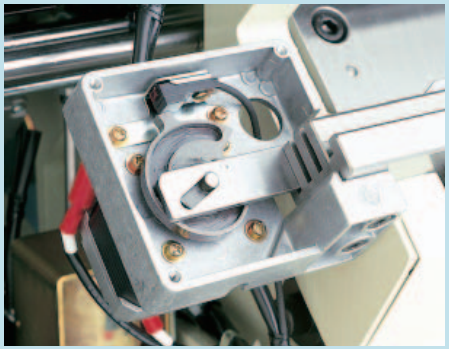
The NewSFG also features a completely new carriage system which is 20% smaller and 30% lighter than its predecessor. The ultra-compact, lightweight design yields lower moment of inertia for quicker, more responsive carriage returns for increased productivity, all while minimizing structural stress on the machine for increased durability.





Stitch Density Control

A new stepping motor finely adjusts stitch density to help the glove conform to the various parts of the hands. Particularly in fine gauge applications, precise adjustments must be made in order to knit a variety of yarns at the fingertips. By doing so, gloves can be shaped to fit fingers and hands snugly and extend the benefits of ultrafine gauge gloves even further.

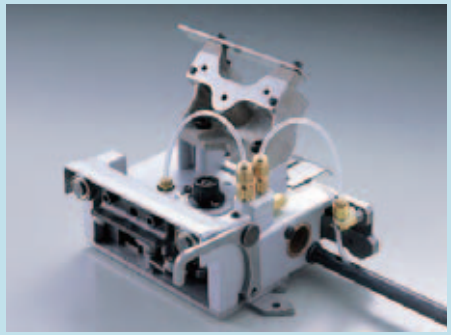


Reliable Yarn-Tail Insertion

Previously, yarn tails sticking out of fingertips were inserted using an air blower. Now the NewSFG features a new motor-driven yarn inserting hook which mechanically, and reliably, inserts yarn tails into the fingertips for the highest possible quality.

Centralized lubrication

The NewSFG's centralized lubrication system features lubrication to all required parts at the touch of a lever. Lubrication with the recommended Genuine Shima Oil provides sufficient coverage to all parts of the machine for minimized wear and easier maintenance. In addition, the NewSFG features computer-controlled automatic lubrication of the sinker and jack, providing an optimum amount of oil to the sinkers according to a preset schedule. Automatic lubrication also prevents over-lubrication, conserving oil and keeping your products clean.



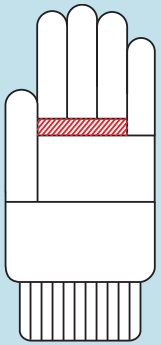
NewSFG Options

Plating Yarn Feeder Control Device

The optional plating yarn feeder control device offers an economical solution to using expensive yarns by cutting back on the use of plating yarn. Electrically conductive yarns for circuit board assembly for example, can be very costly. By regulating the amount of plating yarn, cost can be cut while maintaining the functional capacity of the gloves.

3-Finger Palm Device

For an even more natural fit, we offer the 3-finger palm option. With this option the upper palm portion below the middle-three fingers is knitted separately from the rest of the palm. With the pinky joint mounted lower than the rest, independent movement allows for a more comfortable, better fitting glove. It also makes it easier to mount gloves onto moulds for processing of coated or treated gloves.

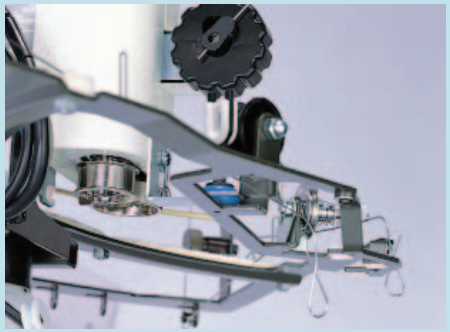


High-Performance Fiber Device

Knitted gloves are gaining popularity as safety gloves. Heat-resistant and cut-resistant gloves using high-performance fiber are especially important in this growing field. The NewSFG can be equipped with cutters and sinker cams that are designed to deal with the challenges of knitting these high-value items.

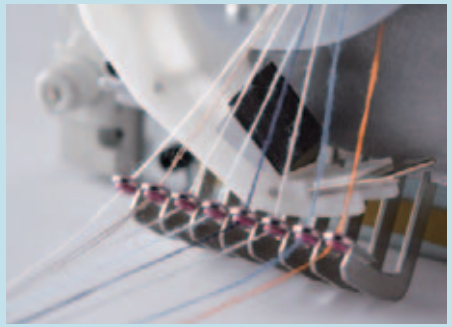
i-DSCS®

Shima Seiki developed the world's first digital stitch device over 20 years ago, and has been improving it ever since. For glove knitting, we offer i-DSCS®. Using computer control to feed yarn in both feed and retrieval directions, i-DSCS® maintains uniform yarn tension throughout knitted portions of gloves for higher quality. Precision control of yarn feed also permits quality knitting using previously difficult-to-knit yarns, supporting recent demand in high-performance yarns such as aramide and polyethylene. i-DSCS® also measures the amount of yarn for each individual portion of each glove, then automatically adjusts yarn consumption accordingly to achieve identical size from glove-to-glove; machine-to-machine for excellent quality control.



Air Splicer

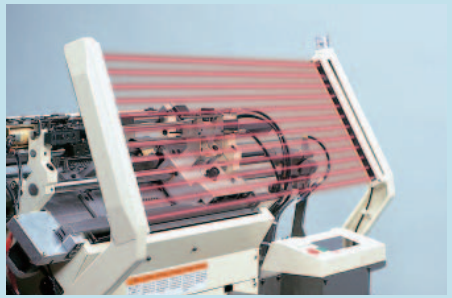
Unlike knotter devices which rely on a cutting and knotting mechanism, the optional air splicer uses a burst of pressurized air to instantly twist together yarns on the fly. Designs with up to 8 colors can be produced on NewSFG very effectively.



Area Sensor

The new area sensor features an invisible protective shield of infrared beams, which when broken stops the NewSFG automatically. The area sensor reduces the likelihood of injury from moving parts, and allows maintenance and cleaning to be performed without removing and replacing safety covers.

FOR YOUR SAFETY, ALWAYS MAKE SURE ALL MOVING PARTS HAVE STOPPED COMPLETELY BEFORE PROCEEDING WITH MAINTENANCE, SERVICE OR CLEANING.



Infrared beams are shown for illustrative purposes only.

CE Mark for Reliable Safety
(CE versions only)

Developed for the European Community, the NewSFG CE version features an integrated safety cover with interlock mechanism and a signal tower for instantly communicating operational conditions. The CE Mark attached to the side of each CE version is a symbol of Shima Seiki's commitment to the safety and reliability of its products (Safety cover is optional on other versions).

NewSFG Samples

10G

Dyneema + Nylon

Dyneema + Kevlar

Magic glove

Kevlar

13G

Cotton for Full coating

Cotton/Turn glove

Spectra

3-Finger Palm option

15G

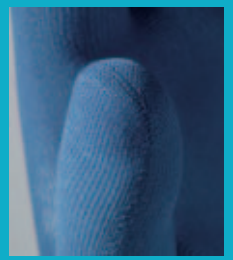
Nylon/Turn glove

Polyester

Nylon/Turn glove

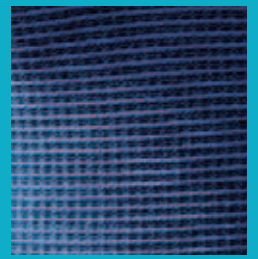
Nylon

18G

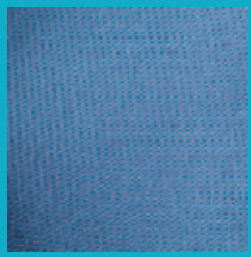


Round and seamless fingertips

Attention to detail between fingers



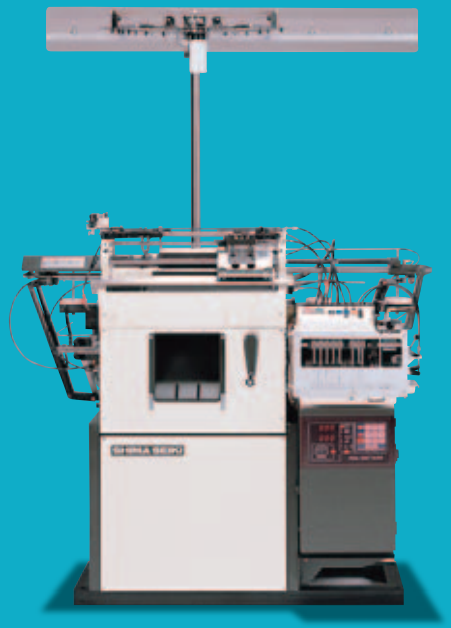
High-quality cuff knitting



High-quality knitting and shaping

THE BEST-SELLING GLOVE KNITTING MACHINE IN THE WORLD.

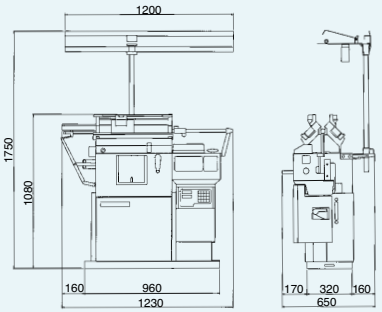
Back in the early 1960's Shima Seiki was originally founded on a mission to develop an automated seamless glove knitting machine. Constant improvements have been made to that original machine in the years since. With pioneering technology, durability and reliable productivity, our machines have enjoyed worldwide popularity throughout the years. Today, our computerized SFG carries on this tradition of success by becoming the best-selling glove knitting machine in the world. SFG gloves have found widespread use—from outdoor leisure activities like camping and fishing, to industrial applications of work gloves on the assembly line. For proven productivity, the SFG is truly second to none.



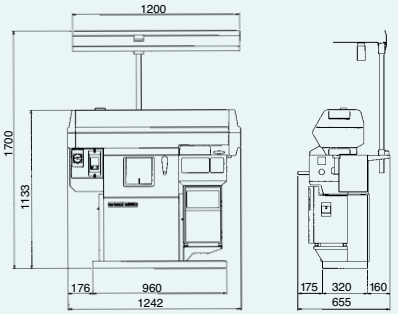
SFG

Automatic Seamless Glove Flat Knitting Machine

■ Standard version



■ CE version



All dimensions are in millimeters.

Average Weight

Standard version	260kg (572 lb.)
CE version	290kg (638 lb.)

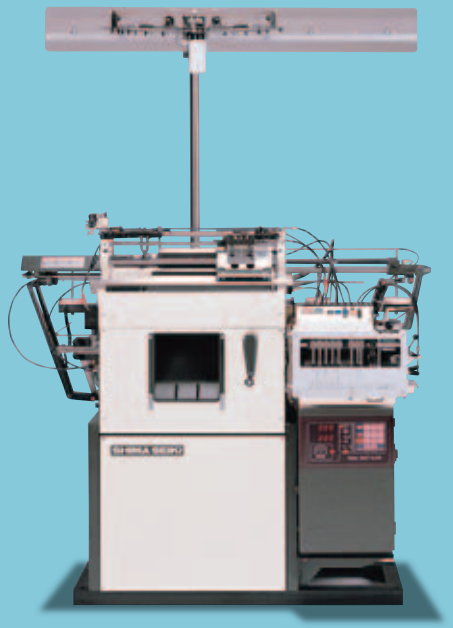
Actual weight is dependent upon model, gauge and optional equipment.

SPECIFICATIONS

Model	SFG	SFM
Gauge	5 · 7 · 8	5 · 7
Size	5G: L2 · L · M · S 7G: L2 · L · M · S · S2 8G: L2 · L · M · S	5G: L · M 7G: L2 · L · M · S · S2 · S3
Speed range	Finger: 50 ~ 210rpm Palm: 25 ~ 110rpm	
Drive	Crank system	
Knitting system	Sinker knitting system	
Lubrication	Centralized lubrication system	
Motor	4P inverter motor	
	3-phase AC 200V 180W	
Stop motion	Yarn break, overload, delivery, elastic yarn break, direction error, low battery, total piece count, etc.	
Controller	Control drum and electronic programming	
Interface	LED display and keypad input	
Power	3-phase AC200V 450VA	
Options	Size changing device Full safety cover (standard on CE version)	
	Open finger 6 color knotter	
	2 color device 2 color device for finger	

A SPECIALTY MACHINE FOR KNITTING PILE GLOVES.

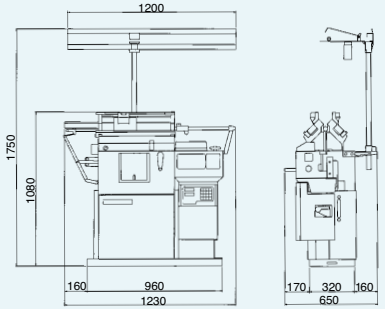
Branching out from the SFG family of glove knitting machines, the SPG is the world's first automatic glove knitting machine to produce seamless pile-knitted gloves. Pile gloves are becoming more popular with their special features such as shock-resistance, thermal insulation and safety cushioning. As a result, these gloves are especially suited to the industrial safety glove market in a variety of applications. Available in both 7 and 10 gauges, the SPG enjoys the same pioneering technology, proven durability and reliable productivity that has made the SFG the best-selling glove knitting machine in the world.



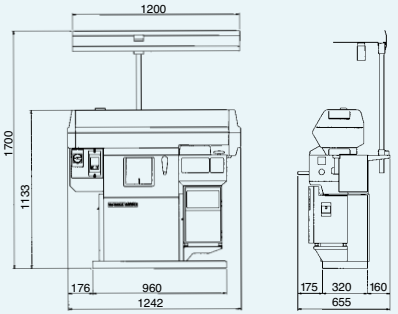
SPG

Automatic Seamless Pile Glove Flat Knitting Machine

■ Standard version



■ CE version



All dimensions are in millimeters.
*STJ/STM dimensions are slightly different

Average Weight	
Standard version	260kg (572 lb.)
CE version	290kg (638 lb.)

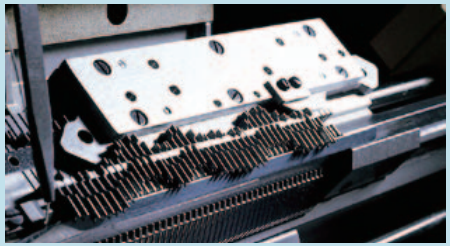
Actual weight is dependent upon model, gauge and optional equipment.

SPECIFICATIONS

Model	SPG	SPM	STJ/STM*
Gauge	7 · 10 · 10D (M only)	7	7
Size	7G: L4 · L3 · L2 · L · M · S · S2 · S3 10G: L4 · L3 · L2 · L · M	L4 · L3 · L2 · L · M	M · S · S2 · S3
Speed range	Finger: 50 ~ 165rpm Palm: 25 ~ 82rpm		
Drive	Crank system		
Knitting system	Sinker knitting system		
Lubrication	Centralized lubrication system		
Motor	4P inverter motor		
	3-phase AC200V 300W		
Stop motion	Yarn break, overload, delivery, elastic yarn break, direction error, low battery, total piece count, etc.		
Controller	Control drum and electronic programming		
Interface	LED display and keypad input		
Power	3-phase AC200V 500VA		
Options	Size changing device Full safety cover (standard on CE version and SPG10)		
*Not available on SPG10	Short feeder*		
	Heavy terry*	—	

Original Sinker Knitting System
(SFG only)

The first of its kind in the world, Shima Seiki's original sinker knitting system allows the SFG to master the production of irregularly-shaped items such as gloves and socks. With this system, the SFG-series offers products that are superior in stretch and strength as well as featuring excellent conformity to the shape of hands.



Special Pile Knitting
(SPG only)

Specially designed needles and sinkers allow the SPG to produce high-quality pile knit gloves. One-sided pile knitting is also available as an option.

Excellent Rounded Fingertip Knitting

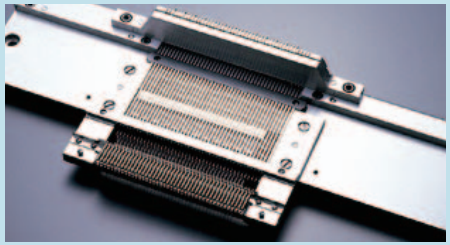
The SFG also employs the sinker knitting system in place of the conventional pull-down system for knitting more rounded and smoother fitting fingertips. In addition, an advanced stitch conversion device permits very snug-fitting fingertips, which are vital for performing precision work while wearing gloves.

Control Panel for Easy User-Interface

The SFG and SPG controller focuses on ease of operation. Large buttons with distinct tactile feedback and clear pictograms avoid confusion and operator error. Large LED displays communicate current knitting conditions at a glance. Touch-control numerical keys also offer convenient data input.

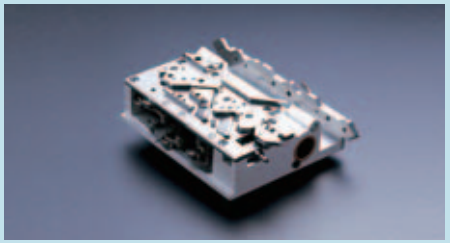
Extremely Durable Needle Bed

The needle bed is formed by inserting special high-precision plates. Manufactured from special steel using state-of-the-art hardening technology, these plates provide extreme strength and durability for high-speed, high-quality product manufacturing, while facilitating the replacement of broken plates.



High-Precision Carriage

The carriage and cam systems are made of carefully selected steel and manufactured using a special computer-controlled hardening process. The hardened material allows highly precise carriage movement for achieving improved consistency and product quality. For the rear carriage, the center cam tuck system has been adopted as well (Not available on SPG).



The Original X-Device

An original Shima Seiki development, the X-device eliminates the necessity for using post-knit overlock sewing machines at the cuffs, which requires much experience and expertise. The X-device is therefore an effective way to cut manual labor costs and increase overall productivity (Not available for machines employing a 4-color conversion device).

Size Changing System
(optional)

A variable needle selection drum enables the number of needles to be changed simply by changing the pins as required. Two different sized gloves can then be knit through the combined use of the optional size changing system. This helps realize greater versatility and more economical production planning.

CE Mark For Reliable Safety
(CE versions only)

Developed for the European Community, CE version machines features a sleek new look that is more than just skin-deep. Represented by such features as an integrated safety cover and interlock mechanism, the CE Mark attached to the side of each CE version is a symbol of Shima Seiki's commitment to the safety and reliability of its products (Safety cover is standard on SPG10, and optional on other versions).

SFG

Kevlar

Option: 2-color device, 6-color knotter, open finger

Option: 2-color device, open finger

SPG7G

Single-sided pile

Option: 4-color device, SPM type

SPG10G

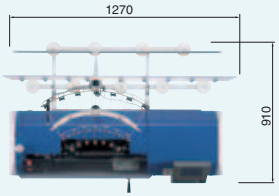
Pile socks

COMFORTABLE, STYLISH SOCKS WITH SEAMLESS TOES AND HEELS.

Shima Seiki's SPF has been the only machine to specialize in the production of five-toe socks with heels. Now that unique technology has been taken to an entirely new level with the introduction of our SPF-W machine. The SPF-W's most significant improvement is its capability to knit both left- and right-foot socks on one machine, whereas the previous SPF required two machines, one dedicated to each foot. Considerable savings can be realized when investing in five-toe sock production, and factory space can be used more efficiently. Knitting on one machine also means higher quality and consistency among left-and-right pairs. Other improvements include digital elastic yarn feed, USB memory interface, an ergonomic control panel, automatic lubrication and optional air splicer. Five-toe socks have recently gained recognition as a stylish and comfortable new genre in footwear, with athletic and health-conscious advantages built-in. With our new SPF-W, taking advantage of this growing market is now easier than ever before.

SPF-W

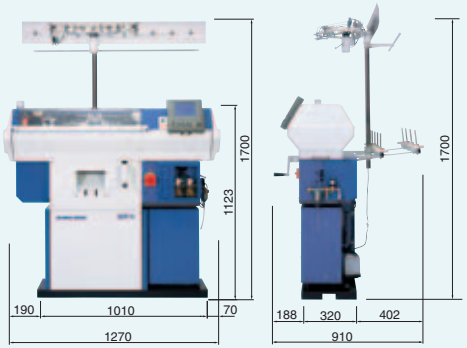
Fully Automatic Sock Flat Knitting Machine



Average Weight

290kg (638lb.)

Actual weight is dependent upon gauge and optional equipment.



SPECIFICATIONS		
Model	SPF-W10	SPF-W13
Gauge	10	13
Size (in needles)	M: 60 L : 65	M: 74 L : 78
Maximum speed	Toe : 210rpm Foot: 110rpm	
Stitch density	Stepping motor (front and back level settings): 10G: 84 levels 13G: 74 levels	
Needle selection	Pin-mounted rotating drum	
Knitting system	Sinker knitting system	
Elastic yarn feeder	Stepping motor controlled. Feed amount digitally programmed. Yarn retrieval.	
Stop motion	Yarn break, overload, delivery, elastic yarn break, direction error, low battery, total piece count, etc.	
Drive system	Crank system	
Motor	300W inverter motor	
Lubrication	Solenoid actuated automatic centralized lubrication system (2 systems)	
Safety devices	Full safety cover for noise-suppression and dust-proofing with stop motion sensor and interlock mechanism. Power supply disconnecting device. Indicator lamps (see below).	
Operation lamp	Green/normal operation. Flashing green/normal stop. Flashing amber/abnormal	
CONTROLLER		
Control system	Electronic programming	
Control display	Monochrome LCD panel. Editing possible via display panel operation. Available in English, Chinese and Japanese.	
Data input/storage	Solid state disk device. USB memory interface.	
Power	Single-phase/3-phase AC200V/220V ± 10%	
OPTIONS		
	1. Air splicer (8 colors) 2. 6-color knotter 3. Open finger device 4. Round toe knitting device 5. Tabi sock knitting device 6. CE Mark	

A Unique Niche Product

Five-toe socks are a unique product with many distinguishing features. Because the toes are split individually, they maintain dryness even under prolonged use, prev a variety of sports. Five-toe socks also offer the rare opportunity to dress up feet when wearing senting athletes' foot. As the toes—which help to distribute body weight—can be spread independently with more ease, five-toe socks are said to offer better balance and stability and are preferred by athletes inandals and to make a unique statement in footwear. Other machines producing five-toe socks lack the capability to knit heels, resulting in an uncomfortable product reminiscent of old tube socks. Only Shima Seiki offers knitted-in heels for five-toe socks with a perfect fit.

Full Computer-Control

Various functions that used to be controlled by a mechanical control drum are now electronically controlled by stepping motors. This eliminates many mechanical limitations and allows SPF-W to change sock type and color at will, expanding possible product lines while maintaining high productivity.

Elastic Yarn Feeding Device

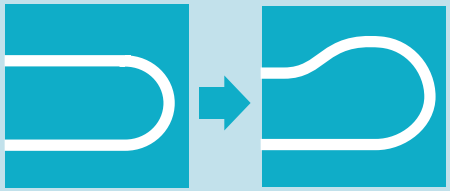
SPF-W's new and improved elastic yarn feeding device now features motor-controlled feeding of elastic yarns. Feeding amount can be pre-programmed for each job, or adjusted using the control panel. Tension is thereby adjusted digitally in both feed and retrieval directions to provide large changes in yarn feed for some unprecedented effects in sock design, fit and comfort.

Reliable Yarn-Tail Insertion

Previously, yarn tails sticking out of toes were inserted using an air blower. SPF-W now features a new motor-driven yarn inserting hook and cutter which mechanically, and reliably, handle loose yarn tails for the highest possible quality.

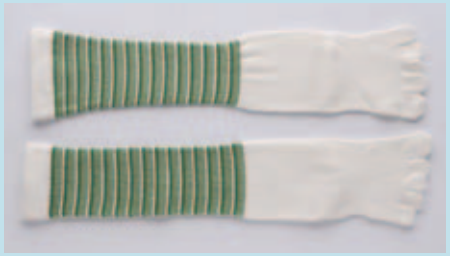
3D-Toes

SPF-W creates five-toe socks with specially formed toes that conform better to the shape of toes for greater comfort and fit.



WideLeg Feature

The Elastic Yarn Tension Controlling Device featured on SPF-W allows adjustable widening of the leg portion for better fit and comfort around the calf.



Automatic Lubrication System

A new lubrication system automatically replenishes the machine over two separate systems. In addition to providing sufficient coverage to all key parts of the machine for minimized wear and easier maintenance, SPF-W also features computer-controlled automatic lubrication of the carriage for sinkers and jacks on a preset schedule. Automatic lubrication also prevents over-lubrication, conserving oil and keeping your products clean (Genuine Shima Oil is recommended).

Air Splicer
(optional)

Unlike knotter devices which rely on a cutting and knotting mechanism, the optional air splicer uses a burst of pressurized air to instantly twist together yarns on the fly. Designs with up to 8 colors can be produced on SPF-W very effectively.

User-Friendly Control Panel

The SPF-W features an all-new computer-control unit with a solid-state disk (SSD) which permits large-capacity storage of knitting data at higher speeds as compared with conventional hard disk drives. A USB memory interface allows data transfer for large file sizes to support increasingly complex patterns and designs. The large LCD control panel offers improved graphic interface for intuitive operation. The eye-level display offers improved ergonomics, while menu-interactive function buttons offer easy input and editing.

Fully Fashioned High-Speed Knitting Machines

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

NewSFG/SFG/SPG/SPF-W Printed in Japan