

# SWG 021N

WHOLEGARMENT® Computerized Flat Knitting Machine



## EXPAND YOUR HORIZONS WITH WHOLEGARMENT® ACCESSORY PRODUCTION.

SHIMA SEIKI's SWG®021N features a compact 10-inch knitting width and our renowned SlideNeedle™ derived directly from our flagship WHOLEGARMENT® knitting machines, offering transfer capability and enhanced knitting techniques far beyond the scope of conventional flat knitting machines. Gloves, socks, five-toe socks, mufflers, leg warmers, neck-ties and other fashion accessories can all be knit without seams. Using the same yarn, all of these items can be fully coordinated as well. These items can also be produced with a variety of patterns, including full jacquard, intarsia, mesh and even new transfer patterns, offering added value for product differentiation. As a glove knitting machine, the SWG®021N is especially unique. With its 3-D shaping capability gloves can be produced to conform perfectly to the human hand, complete with a front-offset thumb for the ultimate in comfort and fit. Whether used as a 3-D glove machine or a WHOLEGARMENT® accessory machine, the SWG®021N achieves a whole new benchmark in knitting to expand your business far beyond present limits.

### The Original SlideNeedle™

SHIMA SEIKI has reinvented the most basic element of knitting—the needle. The new SlideNeedle™ is the result of a thorough re-evaluation of the 150-year old design of the conventional latch needle, and offers knitting possibilities never imagined before. A flexible two-piece slider mechanism splits and extends beyond the needle hook for increased potential especially in complex transfers. Using the slider mechanism for transfer effectively eliminates the transfer clip, allowing the needle to be mounted in the center of the needle groove. SlideNeedle™ thereby achieves perfectly symmetrical loop formation for knitting the highest possible quality fabrics.

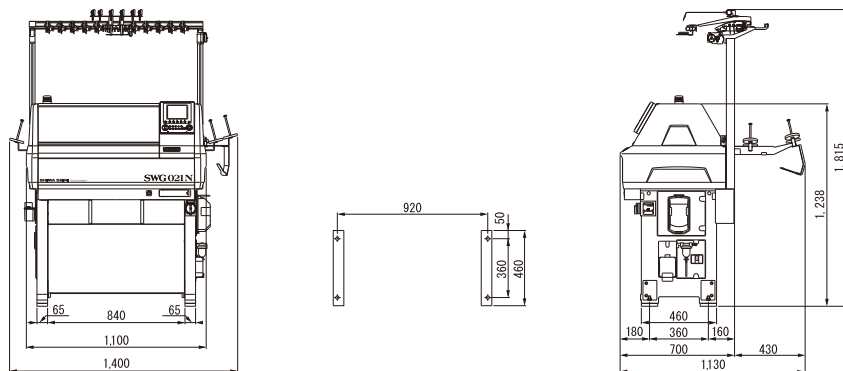
### Edge Yarn Insertion

With the yarn insertion device, edge yarns can be cleaned up not only at the fingertips but also between fingers and toes for gloves and socks. SWG®021N features a motor-driven insertion hook and cutter which ensure reliable insertion.

### Auto Yarn Carrier

SWG®021N features all-new yarn carriers that are motorized and move independently. This eliminates the need for extra carriage courses for moving carriers out of the way during intarsia knitting, dramatically improving productivity and efficiency.

## DIMENSIONS



### Average Weight

SWG<sup>®</sup>021N 320kg(704lbs.)

Actual weight is dependent upon gauge and optional equipment.

All dimensions are in millimeters.

## SPECIFICATIONS

|                                  |   |
|----------------------------------|---|
| Type                             | SWG021N   |
| Gauge                            | 7 • 10 • 15 • 18  |
| Knitting width                   | Variable stroke. Max 10" (25cm)   |
| Knitting speed                   | Max 1.5m/sec (Knitting speed varies according to gauge and knitting conditions). Variably adjustable speed levels. 16 additional programmable speeds.                                 |
| Stitch density                   | 120 levels, electronically controlled.  |
| Second stitch                    | Tight stitch for tuck in intarsia and heel knitting.  |
| Racking                          | Motor-driven. 7G: Max 4-pitch racking to each side, 10G: Max 5-pitch racking to each side, 15G: Max 8-pitch racking to each side, 18G: Max 9-pitch racking to each side.              |
| Knitting system                  | Single system with transfer cams on both sides.   |
| Transfer                         | Back to front during right traverse, front to back during left traverse. Selectable normal transfer or holding.   |
| Sinker system                    | Spring-type moveable sinker system. Sinker reset, sinker stroke adjustment.   |
| Yarn guide                       | Moveable yarn guide.  |
| Fabric presser                   | Equipped on both front and back carriages.  |
| Needle selection                 | Full jacquard selection via special solenoid actuators.   |
| Takedown subroller               | Adjustable. Automatic opening and closing upon command.   |
| Yarn cutter                      | 3 yarn holding hooks and 1 cutter on right side of both front and back needle beds.   |
| Yarn insertion                   | 2 yarn insertion hooks and 1 cutter above needle bed.   |
| Elastic yarn advance device      | Stepping motor controlled. Feed amount up to 500% of full knitting width (adjustable for each knitted part). Right side standard <sup>1</sup> .                                       |
| Air Splicer <sup>2</sup>         | Instant color changes using pressurized air. 8 colors per unit.   |
| i-DSCS <sup>®</sup> <sup>3</sup> | DSCS <sup>®</sup> with Intelligence. Actively controls yarn feed in both feed and retrieval directions.   |
| Yarn feed roller <sup>4</sup>    | Prevents yarn breaks when knitting with delicate yarns.   |
| Auto yarn carrier                | Independent motorized yarn carriers eliminate the need for empty carriage courses. 6 carriers. <sup>5</sup>   |
| Top tensions                     | 6 tension devices.  |
| Yarn break sensor                | 12 devices. One-touch easy threading. Large knots cause machine stop. Small knots cause 0-99 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, delivery error, etc.   |
| Drive system                     | Belt drive, AC servo motor, No lubrication necessary.   |
| Cleaner                          | Special blower operated cleaner.  |
| Safety devices                   | Full safety cover for noise-suppression and dust-proofing with interlock mechanism. 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 system             | Stored program for flat knitting machine.  |
| Control display            | Monochrome LCD panel. Editing possible via display panel operation. Available in English, French, Italian, German, Spanish, Portuguese, Turkish, Chinese, Korean and Japanese. |
| Back-up power <sup>6</sup> | Power supply for resuming knitting after power failure.  |
| Power                      | Single phase AC200V (180V-220V)<br>1.1kVA  |

**OPTIONS :** (1)Elastic yarn advance device (Left side). (2)Air Splicer (7G, 10G and 15G only). (3)i-DSCS<sup>®</sup>. (4)Yarn feed roller. (5)Plating yarn feeder set (7G, 10G and 15G only). (6)Back-up power.

## Fully Fashioned High-Speed Knitting Machine

*your choice*  
**SHIMA SEIKI**

### SHIMA SEIKI MFG., LTD.

85 Sakata Wakayama, 641-8511 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

### SHIMA SEIKI ITALIA S.p.A.

Via Redecesio 11-20090 Segrate (MI) ITALY  
TEL +39-02-216621 FAX +39-02-2139410

### SHIMA SEIKI SPAIN, S.A.U.

Poligono Industrial Can Salvatella, Calle Comadran 35  
08210 Barbera Del Valles, Barcelona, SPAIN  
TEL +34-93-7293727 FAX +34-93-7180626

### SHIMA SEIKI PORTUGAL, UNIPESSOAL LDA

Rua S. Juliao 241, Apartado 3142, Avintes 4431-801, PORTUGAL  
TEL +351-22-787-8580 FAX +351-22-787-8589

### 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 (HONG KONG) LTD.

1901, 19/F, Lu Plaza No. 2 Wing Yip Street,  
Kwun Tong, Kowloon, HONG KONG  
TEL +852-2898-8339 FAX +852-2558-8332

### SHIMA SEIKI KOREA INC.

Seojung Bldg. 1F, 2F, 590-9, Guui-Dong,  
Kwangjin-Gu, Seoul KOREA 143-200  
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.com>

## SAFETY NOTICE

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

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