

# SWG N<sub>2</sub>

WHOLEGARMENT® Computerized Flat Knitting Machine  
SWG®021N2 / SWG®041N2 / SWG®061N2 / SWG®091N2

## EXPAND YOUR HORIZONS WITH FLEXIBLE WHOLEGARMENT® PRODUCTION.

The new "SWG®-N2" series is SHIMA SEIKI's compact class of WHOLEGARMENT® knitting machines. Featuring our renowned SlideNeedle™ on 10-, 16-, 24- and 36-inch wide needlebeds respectively, SWG®021N2, SWG®041N2, SWG®061N2 and SWG®091N2 are capable of producing a range of fashion accessories from gloves, socks, hats, mufflers, neck-ties and other small items, as well as childrenswear and even leggings and tank tops, all in their entirety, with no sewing or linking required\*. The new SWG®-N2 series features the proven R2CARRIAGE® system for higher productivity. A larger number of yarn carriers and holding hooks for yarn cutting, as well as a separate yarn holder with increased capacity allows for even more flexibility in multi-color knitting. In addition to their established reputation in the fashion industry, the SWG®-N2 series is also capable of producing technical textiles, such as industrial material, sports, medicine and safety, expanding your business potential far beyond present limits.

\* Some designs may require partial stitching.



The Original SlideNeedle™

In its pursuit of ideal WHOLEGARMENT® production, 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. A flexible two-piece slider mechanism replaces the conventional latch mechanism and offers possibilities in both knitting and transfer never imagined before. This also 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.



Auto Yarn Carrier

For the SWG®-N2 series, the number of auto yarn carriers is increased. Together with a separate yarn holder with higher capacity, even more flexibility in multi-color knitting can be had. Auto yarn carriers are motorized and move independently, eliminating the need for extra carriage courses to move carriers out of the way during intarsia knitting. This dramatically improves productivity and efficiency.



Control Monitor

The SWG®-N2 series features an all-new full-color LCD touch-sensitive control panel with a larger screen that greatly improves on the previous monochromatic display. User-friendly menu-interactive function buttons permit easy input and editing as well.

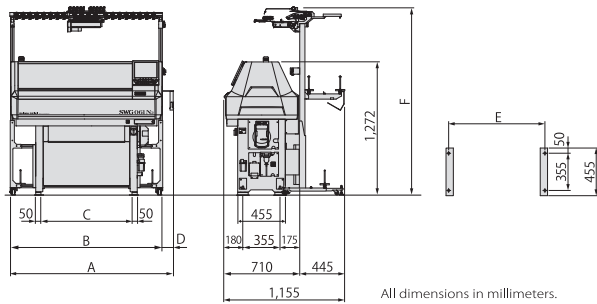
### Rapid Response R2CARRIAGE® System

SWG®-N2 series is equipped with SHIMA SEIKI's proven R2CARRIAGE® (R2=Rapid Response) System. Advanced carriage mechanism combined with improved software programming achieves quicker carriage returns after each course, resulting in higher productivity.

**R2CARRIAGE®**  
RAPID RESPONSE CARRIAGE SYSTEM

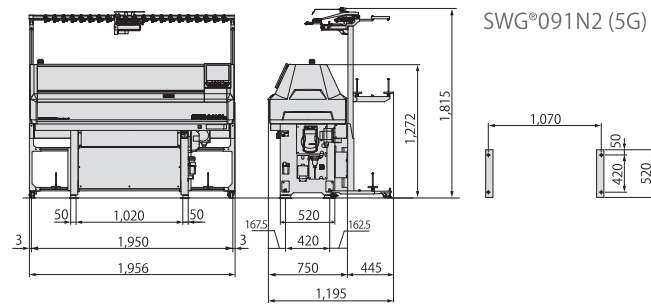


## SWG® N2 DIMENSIONS



All dimensions in millimeters.

|           | A     | B     | C     | D   | E     | F     |
|-----------|-------|-------|-------|-----|-------|-------|
| SWG*021N2 | 1,362 | 1,250 | 870   | 112 | 920   | 1,815 |
| SWG*041N2 | 1,362 | 1,250 | 870   | 112 | 920   | 1,815 |
| SWG*061N2 | 1,557 | 1,450 | 870   | 107 | 920   | 1,797 |
| SWG*091N2 | 1,857 | 1,750 | 1,020 | 107 | 1,070 | 1,797 |



SWG®091N2 (5G)

| Average Weight |                          |                       |
|----------------|--------------------------|-----------------------|
| SWG*021N2      | Machine 315kg (693 lbs.) | Creel 35kg (77 lbs.)  |
| SWG*041N2      | Machine 315kg (693 lbs.) | Creel 35kg (77 lbs.)  |
| SWG*061N2      | Machine 358kg (788 lbs.) | Creel 37kg (81 lbs.)  |
| SWG*091N2      | Machine 424kg (933 lbs.) | Creel 39kg (86 lbs.)  |
| SWG*091N2 (5G) | Machine 450kg (990 lbs.) | Creel 47kg (103 lbs.) |

Actual weight is dependent upon gauge and optional equipment.

| SPECIFICATIONS             |   |                                 |   |                                 |
|----------------------------|---|---------------------------------|---|---------------------------------|
| Type                       | SWG021N2  | SWG041N2                        | SWG061N2  | SWG091N2                        |
| Gauge                      | 7 · 10 · 13 · 15 · 18   |                                 | 5 · 7 · 10 · 13 · 15 · 18   |                                 |
| Knitting width             | Variable stroke, max 10" (25cm)   | Variable stroke, max 16" (40cm) | Variable stroke, max 24" (60cm)   | Variable stroke, max 36" (90cm) |
| Knitting speed             | Max 1.5m/sec (5G: Max 1.2m/sec). Knitting speed varies according to yarn, gauge and other knitting conditions. Speed can be programmed for 16 separate categories.  |                                 |   |                                 |
| Stitch density             | Electronically controlled. 5G : levels, 7G : 120 levels, 10G : 90 levels, 13G : 70 levels, 15G : 60 levels, 18G : 50 levels   |                                 |   |                                 |
| Second stitch              | Tight stitch for tuck in intarsia and heel knitting.  |                                 |   |                                 |
| Racking (to each side)     | Motor-driven. 5G: Max 6-pitch, 7G: Max 4-pitch, 10G: Max 5-pitch, 13G: Max 6-pitch , 15G: Max 8-pitch, 18G: Max 9-pitch.  |                                 |   |                                 |
| Knitting system            | Single system with transfer cams on both sides, 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                   | 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 guides  |                                 |   |                                 |
| Fabric presser             | Equipped on both front and back carriages.  |                                 |   |                                 |
| Needle selection           | Full jacquard selection via special solenoid actuators  |                                 |   |                                 |
| Takedown subroller         | Automatic opening and closing. Adjustable in 10 levels (1-10) with additional fine adjustments in 9 levels (0.1-0.9) possible (SWG*061N2/091N2 only).   |                                 |   |                                 |
| Yarn cutter                | On right side of both front and back needlebeds.  |                                 | 5 yarn holding hooks and 2 cutters (5G: 4 yarn holding hooks and 2 cutters) |                                 |
| Yarn insertion             | 2 yarn insertion hooks and 1 cutter above needlebed.  |                                 |   |                                 |
| Elastic yarn feed 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 (Except for 5G).   |                                 |   |                                 |
| i-DSCS+DTC® <sup>3</sup>   | 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 (Except for 5G).                    |                                 |   |                                 |
| Yarn feed roller           | Prevents yarn breaks when knitting with delicate yarns. Yarn stopper device (5G only).  |                                 | Optional <sup>4</sup>   |                                 |
| Auto yarn carrier          | Independent motorized yarn carriers eliminate the need for empty carriage courses.  |                                 | 10 positions (5G : 12 positions)  |                                 |
| Top tension                | 8 carriers  |                                 | 10 carriers (5G : 8 carriers)   |                                 |
| Yarn break sensor          | 8 units   |                                 | 10 units (5G : 12 units)  |                                 |
| Stop motion                | 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.   |                                 |   |                                 |
| Drive system               | Yarn break, large knot, fabric pileup, shock detection, piece count, over-torque, program error, delivery error, etc.   |                                 |   |                                 |
| Cleaner                    | Belt drive. AC servo motor. No lubrication necessary.   |                                 |   |                                 |
| Safety devices             | Special blower operated cleaner   |                                 |   |                                 |
| Operation lamp             | 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).                                       |                                 |   |                                 |
| Controller                 | Green/normal operation. Flashing green/normal stop. Flashing amber/abnormal stop.   |                                 |   |                                 |
| 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            | 10.4-inch color LCD touch panel (800 x 600 pixels). Editing possible via display panel operation. Help/Message function. Available in English, French, Italian, Spanish, Portuguese, Turkish, Chinese, Korean and Japanese. |                                 |   |                                 |
| Back-up power <sup>5</sup> | Power supply for resuming knitting after power failure.   |                                 |   |                                 |
| Power                      | Single phase AC220V/230V (200V-250V)  |                                 |   |                                 |
|                            | 1.1kVA  | 1.3kVA                          | 1.4kVA (5G: 1.0kVA)   |                                 |

OPTION : (1) Elastic yarn feed device on right side (5G only), Elastic yarn feed device on left side (2) Air Splicer (7G, 10G, 13G and 15G only) 1 unit, 2 units (SWG\*061N2 and SWG\*091N2 only) (3) i-DSCS+DTC® (4) Yarn feed roller (SWG\*021N2 and SWG\*041N2 only) (5) Back-up power



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### Website



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## 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.