Next-Generation Computerized Flat Knitting Machine
THE NEXT GENERATION IN COMPUTERIZED FLATBED KNITTING.

A synthesis of all of Shima Seiki’s experience and know-how, the SWG®-FIRST® series “Next Generation” computerized flatbed knitting machines offer tremendous capability previously unimagined in the world of knitting. Everything from full-fashioning, rib shaping to 3-dimensional shaping, as well as WHOLEGARMENT® production can be performed. This all-purpose capability is made possible through the development of our revolutionary new SlideNeedle™ which offers remarkable improvements in product quality, variety and productivity. Other features such as the Contra-Sinker, Pulldown Device and Yarn Carrier Kickback Device all contribute to even further distinction as the knitting machine for the 21st Century. FIRST® is available in three different bed-lengths, as well as triple- or four-cam versions for even more flexibility.
The All-New SlideNeedle™ and Contra-Sinker System

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. The SlideNeedle™ thereby achieves perfectly symmetrical loop formation for knitting the highest possible quality fabrics. In addition, the new Contra-Sinker actively offsets, and consequently reduces, the total movement of the SlideNeedle™ with a counter-movement. The shallower angle of approach distributes yarn tension more evenly, reducing scuffing and thereby preventing yarn breaks. Together, the SlideNeedle™ and Contra-Sinker achieve better quality while using a wider variety of yarns, not to mention significant improvements in productivity.

12-Way Technique

FIRST®'s SlideNeedle™ doubles the number of available knitting techniques from six to twelve variations. With both front and back beds in operation, this effectively offers 144 potential combinations of techniques as compared to 36 combinations possible with 6-way technique. As a result, all-new structures and sophisticated patterns demand of previous possible raise knitwear to a higher level, even expanding its market range to approach the area of woven products.

Gaugeless Knitting

The new SlideNeedle™ does away with the concept of the fixed “gauge” by permitting an assortment of gauge sizes to be knit “on-the-fly” in a single garment. This allows the freedom to handle changing seasons and shifting trends without investing in a machine for every gauge or resorting to the complex, time-consuming task of gauge conversion. Product variety is also vastly increased by achieving interesting textures and sophisticated visual patterning effects. Unique Split Stitch techniques made possible with the SlideNeedle™ allows smoother gauge-to-gauge transitions which distinguish our gaugeless knitting from other so-called “multiple gauge” applications. FIRST® is available with three different SlideNeedle™ hook sizes (Large, Medium and Standard) for greater control while knitting each gauge range.

Pulldown Device

FIRST®'s new computer-controlled takedown system consists of front and rear panels over which tiny pins are distributed for separately controlling takedown tension for the front and back when knitting WHOLEGARMENT®. In addition, each panel is separated into 1.5-inch sections which can be individually controlled for specific tension control across the entire width of the garment. This precise control over pulldown tension results in a more dimensionally accurate, higher quality garment which conforms better to the shape of the torso.

Loop Presser Bed and Transfer Jack Bed

FIRST®'s new computer-controlled takedown system consists of front and rear panels over which tiny pins are distributed for separately controlling takedown tension for the front and back when knitting WHOLEGARMENT®. In addition, each panel is separated into 1.5-inch sections which can be individually controlled for specific tension control across the entire width of the garment. This precise control over takedown tension results in a more dimensionally accurate, higher quality garment which conforms better to the shape of the torso.

Conventional latch needles offset in grooves  Slide needles centered in grooves
Average Weight

<table>
<thead>
<tr>
<th>SWG/First 123/124</th>
<th>1.252kg (2.754lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWG/First 153</td>
<td>1.486kg (3.230lb)</td>
</tr>
<tr>
<td>SWG/First 183/184</td>
<td>1.976kg (4.347lb)</td>
</tr>
</tbody>
</table>

Actual weight is dependent upon gauge and optional equipment.

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