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## Digitalized adjustments of sewing
## Semi-dry head, digital zigzag stitch sewing system
## "LZ-2290C Series" is launched



JUKI is going to launch "Semi-dry head, digital zigzag stitch sewing system, LZ-2290C Series" on May 21, 2019. The LZ-2290C Series has digitalized adjustment function for "sewing" not only to contribute to improved seam quality and reduced setup time but also to enable production management by combining JUKI exclusive software application with the sewing machine.

This sewing machine is able to sew, in addition to zigzag stitches, scallop stitches, blind stitches and various decorative patterns at the maximum sewing speed of 5,000 sti/min. It is also applicable to sewing of ladies' underwear such as stretch brassieres and shorts, and to sewing of top stitches on pockets of and attaching labels / emblems on jackets. The sewing machine comes with as standard with 20 different sewing patterns. In addition, it is able to store as many as 200 kinds of custom patterns such as decorative sewing patterns in the main body of sewing machine.

The LZ-2290C Series comes in two different types; full-digital type and digital type.

The full-digital type model is the world's first zigzag stitch sewing machine that digitalizes adjustments of the feed mechanism and thread tension according to the kinds of products, sewing portions and type of material. Those adjustments that have conventionally been carried out manually, are digitalized to facilitate setting through the touch panel.

For the feed mechanism, the sewing machine is provided with three selectable types of vertical and horizonal feed mechanisms; standard, soft and hard. Furthermore, the feed mechanism for prevention of material slippage has been added.

One of the characteristics of the LZ-2290C is its rotary system. This sewing machine is the JUKI's first rotary type sewing machine that is provided with the thread tension control capability.

Furthermore, the needle thread tension that is likely to change depending on the sewing speed and the remaining amount of bobbin thread can be corrected automatically. In addition, thanks to the newly incorporated the multi-layered portion detecting function, the thread tension can be set according to the thickness of material at multi-layered portions. Digitalization of those mechanisms contributes to improved seam quality and reduced setup time.

 JUKI will be continuously trying to expand its sales of the "LZ-2290C" that manages production through combination of the sewing machine and JUKI's exclusive application, while making efforts to improve zigzag seam quality and reduce setup time. At the same time, JUKI is going to further pursue feasibility of IoT utilizing solutions to assist smartification of customers' plants.

◆**Features**
（**1**）**Improvement of seam quality**
　①**Vertically- and horizontally-driven digital feed mechanisms < Full digital type >**
　The vertical and horizontal feed mechanisms are controlled by motor. The sewing machine can be adjusted with ease by operating the operation panel. Time consuming change in the feed timing can be done by operating the operation panel. Sewing data can therefore be set with ease to provide the seam quality (soft < == > standard < == > hard) that matches processes. In addition, the feed locus can be changed to prevent material slippage, thereby improving material responsiveness.
　②**Active tension (thread tension control mechanism) has been adopted**
　 **< Full-digital type >**
　The LZ-2290C is the world's first rotary type sewing machine that comes with the thread tension control mechanism. Conventionally, thread tension adjustment has been difficult when the remaining amount of bobbin thread reduces. This mechanism provides stable thread tension even when the bobbin thread remaining amount has decreased. It is also possible to correct the thread tension according to the sewing speed. This advanced thread tension adjustment mechanism helps enhance seam quality.
　③**Multi-layered portion detection device is provided＜full digital＞**
　The LZ-2290C is provided with the multi-layered portion detection device.Sewing conditions on a flat portion and that on a multi-layered portion of material can be respectively set. As a result, conventional problems that are likely to occur when sewing a multi-layered portion of material such as stitch gathering and loose stitches can be prevented.
　④**Sewing of diversified patterns is possible**
　The sewing machine is provided as standard with 11 types/20 patterns of basic stitch shapes. Sewing patterns such as zigzag stitching, T stitching and pattern sewing can be selected on the new operation panel of the main body, thereby substantially increasing the facility operation rate. In addition, a sewing pattern can be created for the brassiere sewing process for sewing a brassiere while skipping its bone portions. This also helps increase productivity.

（**2**）**Full-color operation panel**
　①**Data and sewing machine management with IoT (Internet of Things)**
　A "Two-way" contactless communication for parameter adjustment data can be conducted with the sewing machine by a commercial Android terminal. This feature allows sewing machines in a sewing line to be uniformly set and status checked quickly, thereby contributing to stabilization in product quality. Control panel is standardized with USB ports,

promising simplicity in data management and system updates.

②**JUKI Smart APP allows you to send and confirm various data**

In the application, there are items of management setting (terminal registration), sewing machine data (sewing data), problem-solution chart. In the problem-solution chart, we can generate production graphs, the availability chart, etc. for each acquired sewing machine data so it can be used for checking the current situation and analyzing it.

## （3） Improved work environment

①**LED light**

The LED light is provided as standard on the undersurface of arm jaw. In addition to the conventional function of the LED light, the color shade can be changed over as "white⇔ neutral color (initial value)⇔ incandescent" so as to help reduce the operator's eye fatigue.

②**Triple hand switch**

The triple type hand switch has been introduced. The switch supports many different functions such as touch-back function, mirror function and multi-layered portion correction function.

③ **Automatic OFF function of the operation-panel backlight**

Back light of the panel is automatically turned off in the case the operation panel is not operated for a certain period of time. (The setting is from 1 to 20 minutes.)

④**Sleep mode (Automatic power-OFF function)**

If no operation is carried out for a predetermined period of time, the power supplies to the motor, etc. (The setting is from 1 to 50 minutes.)

⑤**Hook timing adjustment mode**

Hook timing can be safely adjusted while leaving the sewing machine ON by setting operation mode to the "Hook timing adjustment mode" on the operation panel.