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JUKI CORPORATION

August 18, 2016

Next-generation sewing machine utilizing the world's first digitalization and IoT Direct-drive, high-speed, lockstitch sewing system with automatic thread trimmer "DDL-9000C Series" is now launched.



JUKI has digitalized the drive mechanism of the sewing machine which determines the "seam" quality, JUKI launches the new "direct-drive, high-speed, lockstitch sewing system with automatic thread trimmer" DDL-9000C Series in the overseas markets from this August.

The DDL-9000C is the world's first sewing machine which comes with the digital drive mechanism and facilitates data transfer by taking the advantage of IoT. The DDL-9000C Series is the top-of-the-line model of JUKI's lockstitch sewing machines with thread trimmer. The latest model enables numerical entry of settings of five drive mechanisms which work to form seams through the operation panel of main body of sewing machine. For the DDL-9000CS Series (digital type), adjustment of the feed dog height, feed pitch and feed locus is digitalized. For the DDL-9000CF (full-digital type), adjustment not only of those mentioned above but also the presser foot pressure and needle thread tension is digitalized. Thanks to the digitalization, optimum adjustment values required to produce high-quality seams can be stored, on a material-by-material basis, in memory and can be reproduced with ease. For sewing plants which produce diversified products using diversified materials, this feature is quite helpful to achieve stable seam quality.

Recently, sewing plants have to handle dozens of kinds of materials. To adjust their sewing machines to achieve the best seams according to the material, service/maintenance experts and skilled operators make their efforts to finely adjust all sewing machines in the plant, using tools such as a screwdriver, to uniformly achieve well-balanced seams. Lockstitch machines are mainly used and by the largest number in apparel sewing plants. Adjustment of all lockstitch machines in the plant requires enormous time, and yet the adjustment values are not perfectly reproducible. JUKI's latest digital sewing system DDL-9000C Series not only substantially reduces setup time but also reproduces seams that are ideally suited to the material, on a material-by-material basis, only within a few seconds. In addition, once the best-suited settings are stored in memory, they can be used permanently.

Furthermore, appropriately adjusted settings can also be stored on a tablet. Data transfer from the sewing machine to the tablet is quickly completed only by bringing the tablet close to the operation panel. For customers who globally operate in the world, this feature facilitates transmission, sharing and management of data, thereby achieving globally stable quality.

Starting with the development of the direct-drive high-speed lockstitch sewing system with automatic thread trimmer which enables linkage of the sewing systems by means of IoT, JUKI is going to continuously seek a possibility of IoT-utilizing solutions to help customers to improve their plants to highly-productive and computerized smart ones.

◆ Features

● Newly designed DDL-9000C Series provides improved visibility and operability

- Coating color has been changed to match the top-of-the-line model. The new color and new design have made a machine head that is totally different from the conventional JUKI sewing machines. The newly-developed operation panel is placed at the center of arm to improve visibility and operability.

● Vertically- and horizontally-driven digital feed mechanism<The world's first>

- Thanks to the world's first vertically-driven digital feed mechanism, the feed dog height can be adjusted with ease according to the material fabric of product to be sewn, thereby improving seam quality. Thanks to this digital feed mechanism, thread trimming is carried out with the feed dog lowered in the case the shorter-thread remaining thread trimming function is enabled. As a result, the clearance provided between the throat plate and the material is eliminated, thereby stabilizing the length of thread remaining after thread trimming. The feed dog does not protrude the top surface of throat plate when the sewing machine stops with its needle bar up, thereby facilitating placement/removal of the material on/from the top surface of throat plate and preventing the material from being damaged by the feed dog.
- Digitalized vertically- and horizontally-driven feed mechanism allows easy adjustment of settings such as the feed locus only on the operation panel according to the material to be sewn.

● Thread remaining on the material at the end of sewing as short as 3 mm is achieved

- Double-edge drive rotary knife system is adopted. The double edges of the rotary knife intersect with each other directly under the needle entry point to trim the thread. In addition, the groove cam system and the picker device are adopted to allow forcible release of the thread trimmer (double-edge drive rotary knife) even if it locks, thereby securing the appropriate needle thread length and achieving stable length of thread remaining on the material after thread trimming.

● Management of sewing performance and sewing machine by the utilization of IoT (Internet of Things)

➤ Management, browsing and editing of data can be carried out on the application Software

Data on sewing machine adjustments made according to the product to be sewn can be transferred to a commercially-available Android tablet in contactless mode. This enables quick check for uniform settings as well as confirmation of conditions of sewing machines in a sewing line, thereby facilitating setup changes. The operation panel is also provided as standard with a USB port. Data management and software update can be carried out with ease using a USB thumb drive.

※Android OS Version 6.0 is recommended to use JUKI Smart APP.

● Functions necessary for sewing machine operation can be used with the hand switch

➤ Functions of two hand switches can be set through the operation panel. Since the reverse-feed stitching lever is provided as standard, added functions can be customized. 20 different functions (needle-up/down correction sewing, reverse-feed correction sewing, 1-time reverse-feed stitching cancellation function, etc.) are available. Highly convenient operation is enabled by setting the functions which match the sewing process in combination.

● Adoption of the needle-thread active tension (Only for the full-digital type model)

➤ Needle tension is digitally controlled

Needle thread tension which matches sewing conditions given can be set on the operation panel and stored in memory. The needle thread tension adjustment needs experience. However, for this sewing machine, thread tension data stored in memory is reproducible, thereby reducing the setup time when the product to be sewn is changed.

● Active presser foot pressure mechanism (Only for the full-digital type model)

➤ The presser foot pressure is digitally controlled

Digital control system controls the presser foot pressure. Under the automatic mode, the multi-layered section detection function detects changes in material thickness to increase/decrease the presser foot pressure accordingly. Under the manual mode, the presser foot pressure control function is assigned to the hand switch to enable operation with the hand switch.

● Adoption of the 4.3-inch large LCD touch panel (Only for the full-digital type model)

➤ Operability is dramatically improved

The DDL-9000CF Series is provided also with JUKI's unique intelligent sewing system features. This Series can be operated under two different modes; i.e., the operator mode which prioritizes ease of operation and the serviceperson mode. Under the respective modes, the touch panel shows displays that match the respective users. In addition, installation of NFC enables data transfer to an Android tablet. Data transferred from the sewing machine to an Android tablet can be edited also on the tablet.

※The sewing machine can be paired with equipment which supports NFC (Near Field Communication) only by holding the equipment over the sewing machine.