LK-1903A
LK-1903A / BR35 (with button feeder)
Computer-controlled, High-speed, Lockstitch, Button Sewing Machine

LK-1903A-SS-301 (Table stand is optionally available.)

LK-1903A SERIES
The active tension mechanism is provided with the machine as standard.
The machine achieves sewing speed of 2,700rpm. The machine's starting, stopping, thread-trimming and automatic presser lifting speeds have been increased to significantly shorten total cycle time.

Many different sewing patterns.
- The machine is provided as standard with 50 different sewing patterns. The machine permits easy changeover of sewing patterns for effortless execution of an inexhaustible range of sewing specifications.
- The LK-1903A is also able to sew buttons using the same data used for the LK-1903 (EP-ROM).

Excellent seam quality.
- Newly developed needle thread grasping mechanism helps produce consistent knot tying at the beginning of sewing. (This device has been factory-set to “invoking prohibited” status at the time of delivery.)

Auto-lifter mechanism utilizing a new system.
- The machine is provided as standard with auto-lifter that uses a new stepping-motor system. This helps reduce operator fatigue.
- It is also possible to change over the stroke of the auto-lifter from a one-step stroke to a double-step stroke, which offers easier positioning of a material on the machine. For the double-step stroke, an intermediate stopping height can be established on the operation panel.
- The work clamp foot lift can be set to a maximum of 13mm.

The sewing starting point can be corrected.
- In cases where the needle entry point for button sewing is to be corrected, the sewing starting point can be corrected without the adjustment of the relevant mechanism.

Oil stains are eliminated.
- Thanks to our advanced dry-head technology, the frame (needle bar and thread take-up) no longer requires lubrication. This prevents the material from being stained with lubricating oil.
- Just a small quantity of clean oil is supplied from the oil tank to the hook.

OPERATION PANEL (You can choose operation panel.)

STANDARD PANEL
- Functional settings, such as pattern numbers and needle thread tensions can be established through the operation panel with ease. Distance between holes in a button can be easily changed by means of pattern enlargement/reduction feature.
- Standard sewing patterns can be assigned to pattern keys P1 to P50. Any of the sewing patterns assigned to the P1 to P25 pattern keys can be activated with a touch of the corresponding key. This means that workability is improved by assigning 25 sewing patterns that are most frequently used to those pattern keys.
- As many as 20 different cycle sewing patterns, each of which combines a maximum of 30 different sewing patterns, can be stored in the memory.
- The operation panel has been installed at an angle and can be placed at the top, bottom, right or left part of the table according to the operator's preference.

IP-410B Operation panel provided with programmable functions
- The IP-410B operation panel comes with a wider screen for improved operability and programming.
- The color LCD unit displays sewing data such as stitch shape, needle thread tension, enlargement/reduction ratio, maximum sewing speed and the number of stitches at a glance. For data edit operations, detailed data is shown on the screen simply by lightly pressing the display icon, thus contributing to dramatically enhanced efficiency.
- The data storing capacity of the main body of the sewing machine has been substantially enhanced.
- Sewing data created with the IP-410B can be stored in the memory of the main body of the sewing machine. The memory capacity is a maximum of 200 different patterns (max. 20,000 stitches).
- When external media (CompactFlash™) is used, as many as 999 different patterns (max. 20,000 stitches/pattern and the max. number of stitches that can be stored in the memory is 24,000,000) can be stored.

The machine is provided as standard with the active tension (electronic thread tension control mechanism).
- Since the machine is provided with active tension mechanism, it is able to set a needle thread tension that matches various sewing conditions (such as thread, material and sewing speed) on the operation panel, store the data in memory and reproduce it.
- The needle thread tension can be set separately according to the portion of a seam, such as the beginning of a seam, during sewing and end of the seam (fastening stitch).
- When the operation panel IP-410B is used with the machine, the needle thread tension can be established on a stitch-by-stitch basis for upgraded seam quality.
**TABLE OF THE SEWING PATTERNS**

<table>
<thead>
<tr>
<th>Pattern No.</th>
<th>Stitch shape</th>
<th>Sewing thread (pcs.)</th>
<th>Standard length X (mm)</th>
<th>Standard length Y (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 44</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>19 - 45</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>23 - 46</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>26 - 47</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>27</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>28 - 48</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>29</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>30 - 49</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>31</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
<tr>
<td>32 - 50</td>
<td></td>
<td></td>
<td>3.4</td>
<td>0</td>
</tr>
</tbody>
</table>

(1) Standard sewing lengths X and Y given above are given assuming that the scale is 100.

(2) Use the patterns No. 34~50 with hole diameter 1.5mm or less.

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**MODELS CLASSIFIED BY BUTTON SIZES**

<table>
<thead>
<tr>
<th>Model name</th>
<th>LK-1903A-301</th>
<th>LK-1903A-302</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model name</td>
<td>For extra-small button</td>
<td>For small button (accessory)</td>
<td>For medium-size button</td>
</tr>
<tr>
<td>Outside diameter that can be adjusted (mm)</td>
<td>ø8~ø9</td>
<td>ø9~ø10</td>
<td>ø10~ø15</td>
</tr>
<tr>
<td>Sewing size (mm)</td>
<td>Length (Y)</td>
<td>Width (X)</td>
<td>Length (Y)</td>
</tr>
<tr>
<td>Thickness (mm)</td>
<td>1.7 (2.2)</td>
<td>1.7 (2.2)</td>
<td>2.0 (2.2)</td>
</tr>
<tr>
<td>Button clamp jaw lever (combination)</td>
<td>Right</td>
<td>Part No.</td>
<td>Left</td>
</tr>
<tr>
<td>Needle hole guide (mm)</td>
<td>A</td>
<td>1.6 (1.8)</td>
<td>(1.6) (1.8)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>ø2.8</td>
<td>(ø3.5) (ø3.5)</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>ø1.6</td>
<td>(ø1.6) (ø2.0)</td>
</tr>
<tr>
<td>Feed plate</td>
<td>MAZ15502000(ø8.5)</td>
<td>← MAZ15602000(ø10)</td>
<td>MAZ15702000(ø12.5)</td>
</tr>
</tbody>
</table>

*Parts shown in parentheses ( ) are optional. Engraved marker*

---

**Model name**

<table>
<thead>
<tr>
<th>Option</th>
<th>Part No.</th>
<th>Name of part</th>
</tr>
</thead>
<tbody>
<tr>
<td>14146054</td>
<td>Pick-up device complete</td>
<td></td>
</tr>
<tr>
<td>DIA01M1YCOA</td>
<td>Needle bar (for TQ-1)</td>
<td></td>
</tr>
<tr>
<td>MAZ160170AO</td>
<td>Wiper (asm.)</td>
<td></td>
</tr>
<tr>
<td>40015434</td>
<td>Moving plate link A</td>
<td></td>
</tr>
<tr>
<td>14148209</td>
<td>Bushing</td>
<td></td>
</tr>
<tr>
<td>SL6030892TN (2 pcs.)</td>
<td>Screw</td>
<td></td>
</tr>
<tr>
<td>MAZ16015000</td>
<td>Button support link</td>
<td></td>
</tr>
<tr>
<td>SD0640321TP</td>
<td>Hinge screw</td>
<td></td>
</tr>
<tr>
<td>40010103</td>
<td>Connecting link</td>
<td></td>
</tr>
<tr>
<td>SL6040892TN (2 pcs.)</td>
<td>Screw</td>
<td></td>
</tr>
<tr>
<td>MAZ16021000</td>
<td>Needle hole guide</td>
<td></td>
</tr>
<tr>
<td>MTO30081400</td>
<td>Needle TQX #14</td>
<td></td>
</tr>
</tbody>
</table>

---

**Pattern No.**

18, 19, 20, 21, 22
Newly developed machine head, LK-1903A is adopted. LK-1903A/BR35 is now available.

- It provides better productivity as it achieves the maximum speed of 2,700rpm (2,500rpm in normal use) and is equipped with the high speed trimmer.
- With our original horizontal forced feed mechanism, the button carrier sets a button in position so that the operation is simplified. Furthermore, operator fatigue is reduced since what operator needs to do is only setting material and pressing a pedal.

**OPERATION PANEL**

The variety of functions can be easily adjusted by the simplified operation panel. Alarm lamp will be activated when problem is detected so that proper measures can be taken quickly.

- **Automatic supply mode**
  The machine and button feeder are connected and run together. It starts sewing a button by pressing a pedal, thread trimmer is activated after sewing a button, and button feeder sets the next button in position automatically. The machine repeats these operations with this mode.

- **Mode for individual**
  This mode is for the machine only. As button feeder will not be activated, this can be used as a standard button sewing machine.

- **Mode for small lots**
  Same as the automatic mode, but parts feeder will not be activated. It discharges the required amount of buttons in the index and sews buttons automatically. This is suitable for smaller lots.
### MODELS CLASSIFIED BY BUTTON SIZES

<table>
<thead>
<tr>
<th>Model name</th>
<th>LK-1903A-311/B</th>
<th>LK-1903A-312/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Button size</td>
<td>For small button</td>
<td>For medium-size button</td>
</tr>
<tr>
<td>Outside diameter that can be adjusted (mm)</td>
<td>ø10~ø15</td>
<td>ø12~ø18</td>
</tr>
<tr>
<td>Sewing size (mm)</td>
<td>Length (Y)</td>
<td>0~3.5</td>
</tr>
<tr>
<td></td>
<td>Width (X)</td>
<td>0~3.5</td>
</tr>
<tr>
<td>Thickness (mm)</td>
<td>1.7 (2.2)</td>
<td>2.7</td>
</tr>
</tbody>
</table>

### BUTTON CARRIER

#### Configuration of button carrier

For 4-holed button

- Distance A(mm): Distance between holes in button
- Distance B(mm): Diameter of set pin

For 2-holed button

- Distance A(mm): Distance between holes in button
- Distance B(mm): Diameter of set pin

#### Standard

- 2.6 1.0: 165-57902 A
- 2.6 1.2: 165-58009 B

#### Optional

- 2.0 1.0: 165-90507 Q
- 2.2 1.0: 165-90606 R
- 2.4 1.2: 165-88501 S
- 2.6 1.2: 165-88600 T
- 3.0 1.5: 165-88606 F1
- 3.1 1.0: 165-87206 D
- 3.1 1.2: 165-89004 X
- 3.1 1.4: 165-89202 Z
- 3.2: 165-89905 G1

#### Feed plate

- MAZI5502000 (ø8.5) MAZI5602000 (ø10)

### OPTIONS

#### Magnet wiper

- Applicable model
- Part No.
- Description
- Quantity

<table>
<thead>
<tr>
<th>Applicable model</th>
<th>Part No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LK-1903A</td>
<td>40018334</td>
<td>Solenoid for wiper (asm.)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>SM6041150TP</td>
<td>Screw</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>TA1250705RO</td>
<td>Rubber plug</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>HK00123000C</td>
<td>Cable clip</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>SL0410915C</td>
<td>Screw</td>
<td>4</td>
</tr>
</tbody>
</table>

When you install magnet wiper on the machine head after factory shipment, a part of belt cover should be modified.

### SHAPE OF BUTTON

#### Applicable button

- Shape of button
- Thickness of button should be 1.8~3.5mm.
- Button without indented part (concavo-convex shape button)

#### Inapplicable carrier

- Shape of button
- Thickness of button should be 1.2mm or less
- Button with thin edge may not be fed by the button feeder.

#### Code

- A: ø3.5
- B: ø2.0
- C: ø3.5
- D: ø1.6
- E: ø1.8
- F: ø1.6
- G: ø1.8
- H: ø2.0
- J: ø2.2
- K: ø2.4
- L: ø2.4
- M: ø2.6
- N: ø2.6
- P: ø3.0
- Q: ø3.0
- R: ø3.1
- S: ø3.1
- T: ø3.1
- U: ø3.2
- V: ø3.6
- W: ø3.8
- X: ø4.0
- Y: ø2.8
- Z: ø3.8
- E1: ø3.6
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model name</th>
<th>LK-1903A</th>
<th>LK-1903A/BR35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. sewing speed</td>
<td>2,700rpm (normal 2,500rpm)</td>
<td></td>
</tr>
</tbody>
</table>

#### Button size
- Type: Round-shaped, flat button
- Size: ø8~ø32mm (standard ø8~ø20mm)
- Type: Round-shaped, flat button (2-holed, 4-holed)
- Size: ø9~ø20mm
  - For small button: ø10~ø15mm
  - For medium-sized button: ø12~ø18mm
  - (Those that are smaller than ø10mm or larger than ø18mm must be specially ordered.)
- Thickness: 1.8~3.5mm

#### Stitch length
- 0.1~10mm (0.1mm step)

#### Needle bar stroke
- 45.7mm

#### Lift of the work clamp foot
- Max. 13mm

#### Auto-lifter
- Provided as standard (stepping motor type)

#### Needle thread tension
- Active tension (electronic thread tension control system)

#### Needle (at the time of delivery)
- DP×17(#14)

#### Hook
- Standard shuttle hook

#### Number of stitches that can be stored in memory
- Max. 20,000 stitches

#### Number of standard patterns
- 50 patterns

#### Number of data that can be input
- 200 patterns (for up to 150 patterns, sewing data can be added.)

#### Enlarging/Reducing facility
- 20~200%(1% step), Pattern enlargement/reduction can be done by increasing/decreasing the stitch length

#### Memory medium
- EEPROM/EPROM

#### Bobbin thread counter
- Provided as standard (up/down method)

#### Supplied and sorting of button
- Vibration system

#### Button feed
- Horizontal forced button-feed mechanism

#### Button feed mode
- Automatic feed mode, non-feed mode, and small-lot sewing mode

#### Lubrication
- Hook: minute-quantity lubrication

#### Lubricating oil
- JUKI New Defrix Oil No.2 (equivalent to ISO VG32)

#### Sewing machine motor
- 450W compact AC servomotor (direct-drive system)

#### Power consumption
- 320W

#### Weight
- Machine head (include motor) 42kg, Control box 16.5kg

#### WHEN YOU PLACE ORDERS

Please note when placing orders, that the model name should be written as follows:

**[Machine head]**

![LK1903ASS](image)

- **Application Code**
  - Standard: S

- **Work clamp foot Code**
  - Standard: S

- **Button clamp jaw lever Code**
  - For extra-small, small button: 301
  - For small button: 302
  - For medium-size button: 311
  - For small button (standard: 16mm): 312

- **Feed plate Code**
  - For small button: S
  - For medium-size button (22mm): M

**[Control box]**

![M596](image)

- **Operation panel Code**
  - Standard panel: SS
  - IP panel for LK-1900A (CompactFlash): P410B

- **Power supply Code**
  - 3-phase: 200~240V
  - Single-phase: 200~240V

- **Needle thread tension**
  - Active tension (electronic thread tension control system)

- **Needle (at the time of delivery)**
  - DP×17(#14)

- **Hook**
  - Standard shuttle hook

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  - Max. 20,000 stitches

- **Number of standard patterns**
  - 50 patterns

- **Number of data that can be input**
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- **Enlarging/Reducing facility**
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- **Memory medium**
  - EEPROM/EPROM

- **Bobbin thread counter**
  - Provided as standard (up/down method)

- **Supplied and sorting of button**
  - Vibration system

- **Button feed**
  - Horizontal forced button-feed mechanism

- **Button feed mode**
  - Automatic feed mode, non-feed mode, and small-lot sewing mode

- **Lubrication**
  - Hook: minute-quantity lubrication

- **Lubricating oil**
  - JUKI New Defrix Oil No.2 (equivalent to ISO VG32)

- **Sewing machine motor**
  - 450W compact AC servomotor (direct-drive system)

- **Power consumption**
  - 320W

- **Weight**
  - Machine head (include motor) 42kg, Control box 16.5kg

**[Machine head]**

![LK1903ASS](image)

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  - Standard: S

- **Work clamp foot Code**
  - Standard: S

- **Button clamp jaw lever Code**
  - For small button: 311
  - For medium-size button: 312

- **Feed plate Code**
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  - For medium-size button (22mm): M

**[Control box]**

![M596](image)

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  - Active tension (electronic thread tension control system)

- **Needle (at the time of delivery)**
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- **Hook**
  - Standard shuttle hook

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  - Max. 20,000 stitches

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- **Bobbin thread counter**
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- **Supplied and sorting of button**
  - Vibration system

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  - Horizontal forced button-feed mechanism

- **Button feed mode**
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  - 450W compact AC servomotor (direct-drive system)

- **Power consumption**
  - 320W

- **Weight**
  - Machine head (include motor) 42kg, Control box 16.5kg

*To order, please contact your nearest JUKI distributor.*

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**JUKI CORPORATION**

**MARKETING & SALES H.Q.**

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FAX: (81) 3-3430-4909

http://www.juki.com

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*Specifications and appearance are subject to change without prior notice for improvement.*

*Read the instruction manual before putting the machine into service to ensure safety.*

*This catalogue prints with environment-friendly soy ink on recycle paper.*

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*CompactFlash™ or CF specification compatible media.*

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