#### CDECIEICATIONS

SPECIFICATIONS								
Model name	LK-1903BNB	LK-1903BN	LK-1903BN/BR35					
Max. sewing speed		2,700sti/min <b>※</b>						
Button size	Type: Round-shaped, flat button Size: φ8~φ20mm 301: φ8~φ20	Type: Round-shaped, flat button Size: φ8~φ32mm 301: φ8~φ20 302: φ10~φ20 OPTION: φ15~φ32	Type: Round-shaped, flat button (2-holed, 4-holed) Size: φ9~20mm For small button: φ10~φ15mm For medium-sized button: φ12~φ18mm (Those that are smaller than φ10mm or larger than φ18mm must be specially ordered.) Thickness: 1.8~3.5mm					
Stitch length		0.1~10mm (0.1mm st	ep)					
Needle bar stroke		45.7mm						
Lift of the work clamp foot	Max. 10mm	Max. 13mm	Max. 11mm					
Auto-lifter		Provided as standard (stepping	motor type)					
Needle thread tension		Active tension (electronic thread tensi	ion control system)					
Needle (at the time of delivery)	DP×17 (#11)	DP×1	7 (#14)					
Hook		Standard shuttle hoo	ok					
Number of stitches that can be stored in memory		Max. 20,000 stitche	S					
Number of standard patterns	34 patterns	50 pa	atterns					
Number of data that can be input	200 patterns							
Enlarging/Reducing facility	20~200%(1% step), Patte	ern enlargement /reduction can be don	ne by increasing /decreasing the stitch length					
Memory medium		Internal-organs memo	ory					
Bobbin thread counter		Provided as standard (up/dow	vn method)					
Bird's nest preventing / Shorter-thread remaining functions	Provided							
Supplying and sorting of button			Vibration system					
Button feed	3		Horizontal forced button-feed mechanism					
Button feed mode	<del></del>		Automatic feed mode, non-feed mode, and small-lot sewing mode					
Lubrication		Hook: minute-quantity lub	rication					
Lubricating oil		JUKI New Defrix Oil No.2 (equivale	ent to ISO VG32)					
Sewing machine motor		Compact AC servomotor (direct-	drive system)					
Power consumption	250VA	250VA	320VA					
Weight	Machine head (include motor) 42kg, Control box 5.1kg	Machine head (include motor) 42kg, Control box 5.1kg	131kg (include machine head, table and BR35)					
* "eti/min" etande for "Stichee per Minute"								

"sti/min" stands for "Stiches per Minute"

X Other company names and product names/brand names are trademarks or registered trademarks of the respective companies.

#### WHEN YOU PLACE ORDERS

Standa	ard				on Code	VV OII CIGII	np foot Code	Dutton	clamp jaw leve	Code
Dirdlo	ai G	S		Standard	S	Standard	S		all button	311
Shorte	nest preventing / r-thread remainin	g functions B						For me	dium-size button	312
ne head			_	Machine head				7		
LK1903	BN			LK19(	03E	3NSS			35	JS
Work clamp foot	Code Button	clamp jaw lever	Code							J
Standard		ra-small,		Feed plate	Code	Powe	r supply	Code	Panel	Code
The Committee of the Co	small b	[1] : [1] :	301	For small button	S ,	3-phase	200V	J	for NFC	S
	For me	dium-size button	302	For medium-size	M	o-priase	220V	K	. <del>.</del>	
ol box	<b>※</b> 301 : Ap	plication code B only.		button	1000000	Single-phase	220V	D		
						Jingic-phase	CE 230V	G		
MC672										

To order, please contact your nearest JUKI distributor.

JUKI ECO PRODUCTS

JUKI ECO PRODUCTS LK-1903BN Series is an eco-friendly product which complies with JUKI ECO PRODUCTS standards for protecting the environment. The sewing machine complies with the "Juki Group Green Procurement Guidelines" on the use of hazardous substances, which is stricter than other restrictions, such as those of the RoHS Directive. For details of JUKI ECO PRODUCTS, refer to: http://www.juki.co.jp/eco\_e/index.html

\*The RoHS Directive is an EU Directive limiting the use of 6 hazardous substances (lead, hexavalent chromium, mercury, cadmium, PBB and PBDE) in electrical and electronic equipment.

The Juki Green Procurement Guideline is the voluntarily established criteria to eliminate not only the aforementioned six substances, but also other ones which also adversely affect the environment.

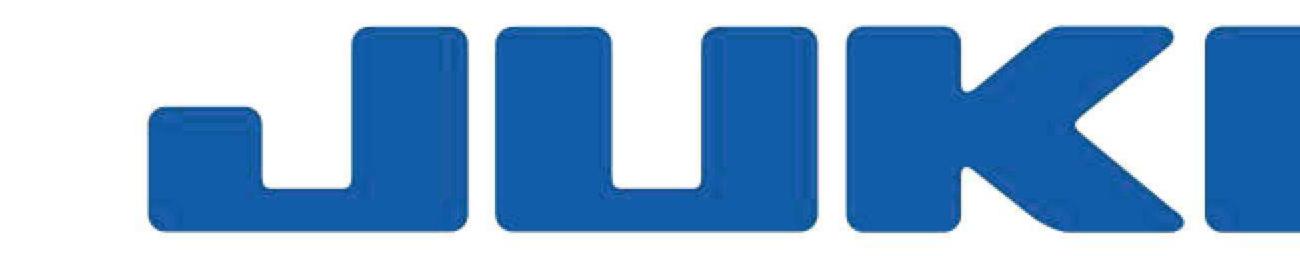












### LK-1903BN Series

Computer-controlled, High-speed, Lockstitch, Button Sewing System

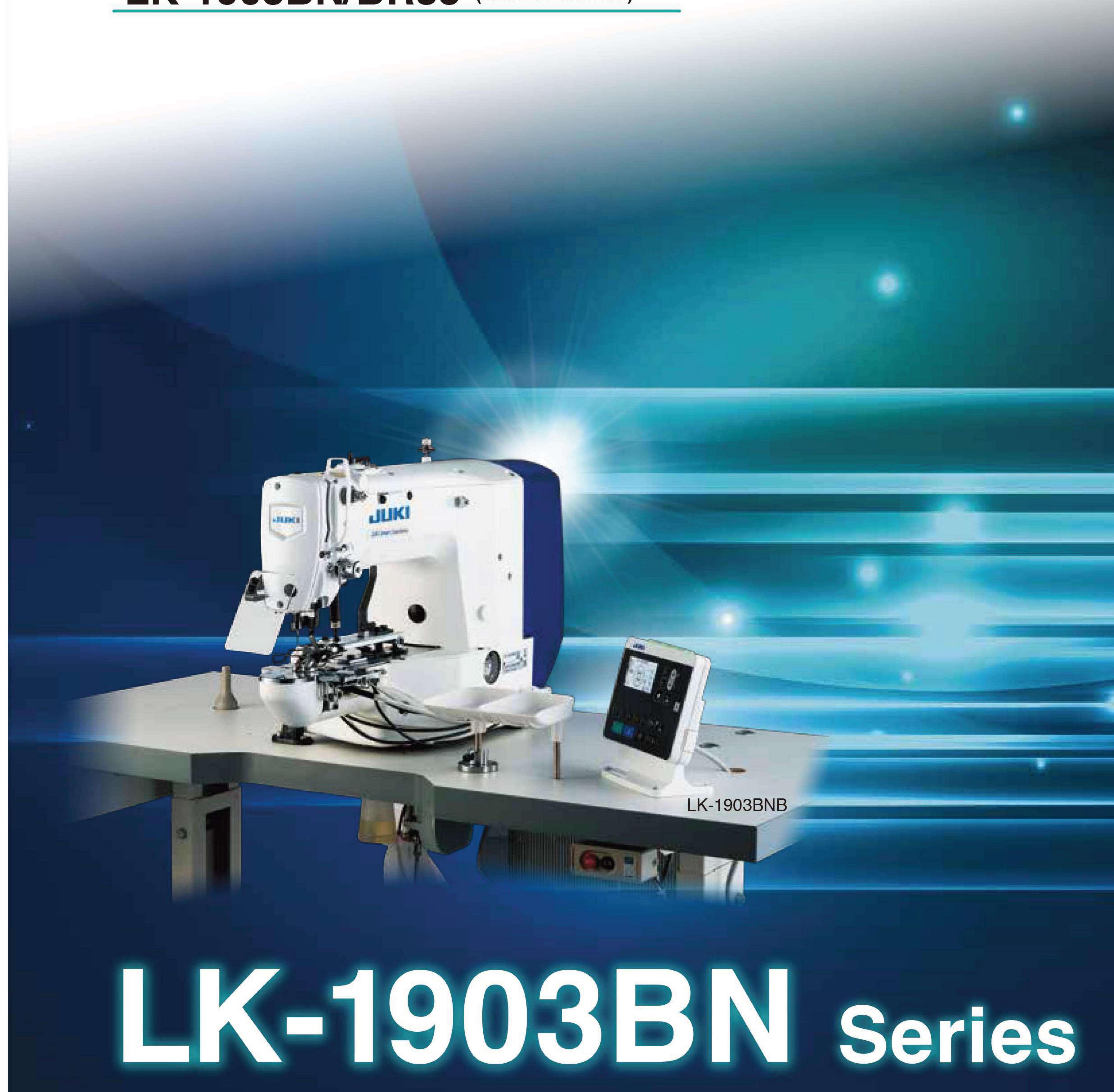


LK-1903BNB (Bird's nest preventing / Shorter-thread remaining functions)

LK-1903BN (Standard Type)

LK-1903BN/BR35 (with button feeder)





### Management of sewing performance and sewing machine with JUKI's next-generation sewing system.

Machine is mounted with inbuilt NFC (Near Field Communication) and communication devices capable of a 2-way data transmission.

#### Higher productivity.

The machine achieves sewing speed of 2,700sti/min. The machine's starting, stopping, thread-trimming and automatic presser lifting speeds have been increased to significantly shorten total cycle time.

#### Excellent seam quality.

Needle thread grasping mechanism helps produce consistent knot tying at the beginning of sewing.

#### 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-1903BN is also able to sew buttons using the same data used for the LK-1903 (Data in EP-ROM are enabled by conversion).

#### The sewing starting point can be corrected.

The sewing starting point can be shifted in the X/Y direction. This enables the correction of a sewing pattern in accordance with the presser foot configuration.

#### 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.

#### Eco-friendly power saving

An encoder is installed in the pulse motor, thereby achieving substantially improved power-consumption saving.

#### Auto-lifter mechanism utilizing a system.

- The machine is provided as standard with auto-lifter that uses a stepping-motor system. This helps reduce operator fatigue.
- It is also possible to change over the stroke of the auto-lifter from a onestep 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.



LK-1903BNS

#### The machine is provided as standard with the active tension

(electronic thread tension control mechanism).

- Since the machine is provided with an 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 separated according to stitching type or portion of a seam, such as the beginning part of the seam, base stitched part, zigzag stitched part and end of the seam (fastening stitch).
- When the operation panel is used in combination with the active tension, the needle thread tension can be set on a stitch-by-stitch basis. This helps eliminate undesired thread tension variations at a multi-layered part of a material or with sewing direction, thereby contributing to upgraded seam quality.

#### STANDARD PANEL

#### 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.

Data items of sewing can be numerically managed to ensure "stable quality" and "reduction in time required for setup changes". Quantified sewing data can be externally taken from the sewing machine

\*Android OS Version 6.0 is recommended to use JUKI Smart APP. (Operation is confirmed with respect to Versions 5.0 and later.) Contact JUKI distributor in your area for how to use the application software.

using an Android tablet or USB thumb drive.

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







### LK-1903BNB

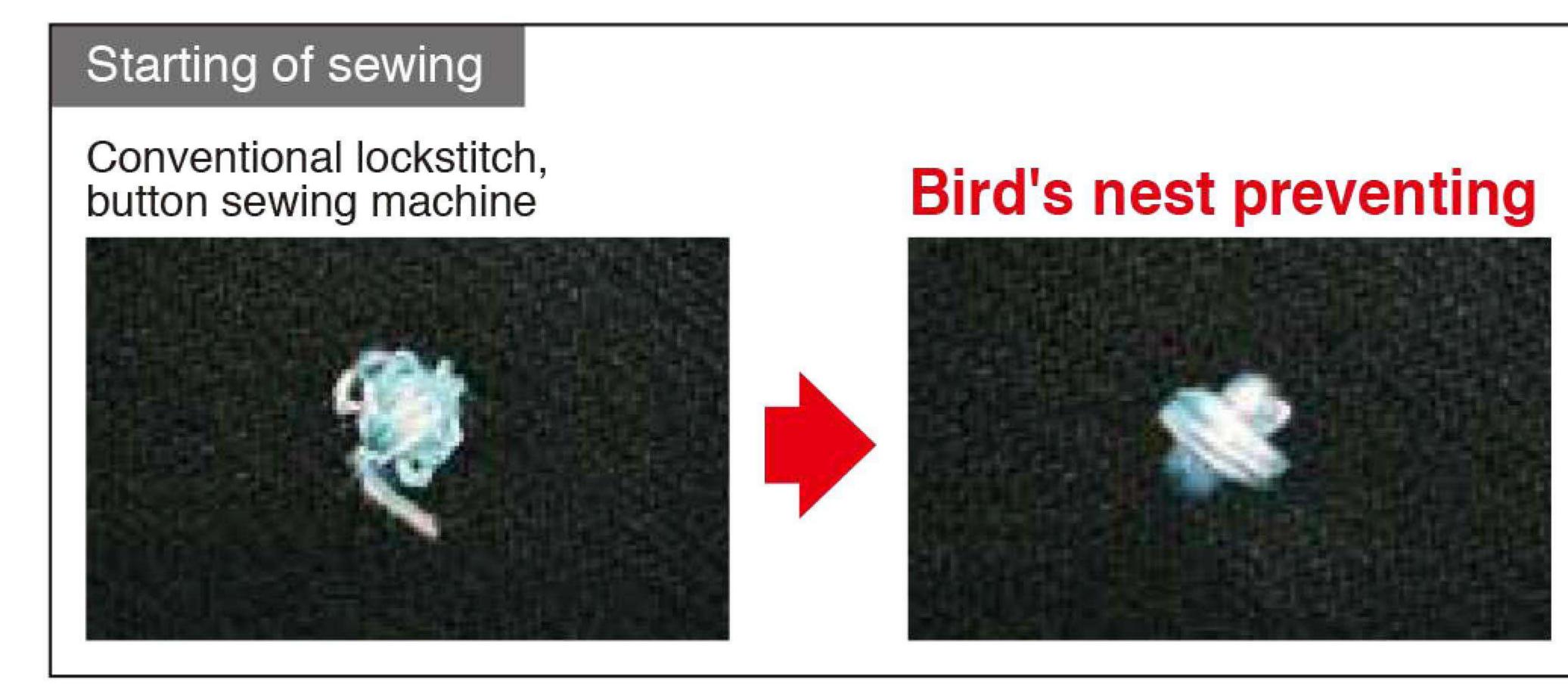
Button sewing machine with the bird's nest preventing / shorter thread remaining functions which eliminates thread nipping work

Users who are conscious about the finished quality of products manually nip, with scissors, the thread remaining on the material after thread trimming at the end of sewing. Now, the button sewing machine with the bird's nest preventing/shorter thread remaining functions saves such users the trouble of nipping the thread, thereby preventing the sewing product from being damaged by manual thread-nipping with scissors.



The sewing machine eliminates so-called "bird's nests" (thread tangling in on the wrong side of the material at the beginning of sewing).

The thread is retained at the beginning of sewing and any excess thread is trimmed during sewing. As a result, the length of thread sewn in the seam is shortened, thereby achieving high-quality sewing performance while preventing thread from tangling in on the wrong side "of the material."

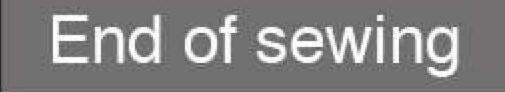


\*Use #60-80 (TEX22-30) polyester spun thread

#### Length of thread remaining on the material at the end of sewing has been reduced to 2 mm or less\*.

The newly-developed shorter-thread remaining mechanism trims the thread shorter after the regular thread trimming operation. Additionally, thread waste produced by thread trimming is withdrawn by suction. Thanks to this mechanism, the trouble of manual thread nipping is avoided.

\*Remaining length of thread varies with sewing conditions.



Conventional lockstitch, button sewing machine

Model name







LK-1903BNB-301

#### TABLE OF THE SEWING PATTERNS

# LK-1903BNB

	121								
Pattern No.	Stitch shape	thread	length	Standard length Y (mm)	Pattern No.	Stitch shape	thread	Standard length	
1.34		6-6			14		10-10		
2.35		8-8			15.42	*	6-6	2 1	2 1
3		10-10			16.43	*	8-8	3.4	3.4
4		12-12			17	*	10-10		
5.36	(m)	6-6			18.44		6		
6.37	(3-6)	8-8			19.45		8		
7		10-10	3.4	3.4	20		10	3.4	0
8	(m)	12-12			21		12		
9.38	(2)	6-6			22		16		
10.39		8-8			3-				
11		10-10							
12.40	<b>%</b>	6-6							
13.41	(32)	8-8							

#### ※(1) Standard sewing lengths X and Y given above are given assuming that the scale is 100. (2) Use the patterns No. 34~45 with hole diameter 1.5mm or less.

#### MODELS CLASSIFIED BY BUTTON SIZES

IMEGE					-12-100	New Cally			
Button size			For e	xtra-smal	l buttor	า	For small buttor (accessory)	1	
Outside diame that can be ad		(mm)	φ8~φ9 φ9~φ10 φ10~φ15				φ10~φ20		
Sewing size	Lengt	h (Y)	0~2.5	0~3.0	0~3	.5	0~3.5		
(mm)	Width		0~2.5	0~3.0	0~3.	.5	0~3.5		
	Thickness (mm)			1.7 (2.2)		1.7 (2.2) (2.7)			
			*				(0.9)	*	
Dutton clamp	Part No.		MAZ158070BB G				14148852	K	
Button clamp jaw lever (combination)		Diabt	(MAZ158070BA) F				(MAZ155070B0)	В	
		Right					(MAZ156070B0)	С	
				-		-	(B25553720A0)	_	
			MAZ158080BB				14148951	K	
			(MAZ158080BA)				(MAZ155080B0)	В	
		Left					(MAZ156080B0)	С	
				: <del></del>		_	(B25573720A0)		
Needle hole guide (mm) φC	A			0			0		
( <del>                                    </del>	В			(d <del></del> )			9		
	С			φ2			φ2		
Α	Part I	Vo.		4014682	1		40146821		
Feed plate					401	468	28		
A.P.Salif			2002					100	

※Parts shown in parentheses ( ) are optional. ★: Engraved marker

## LK-1903BN

Lockstitch, Button Sewing System of standard type

The machine achieves sewing speed of 2,700sti/min The machine's thread-trimming etc. have been increased to significantly shorten total cycle time. The machine is provided as standard with 50 different sewing patterns at higher productivity. The LK-1903BN is a lockstitch button sewing machine which is not only applicable to many different sewing specifications but also able to carry out cycle sewing and produces high-quality seams.



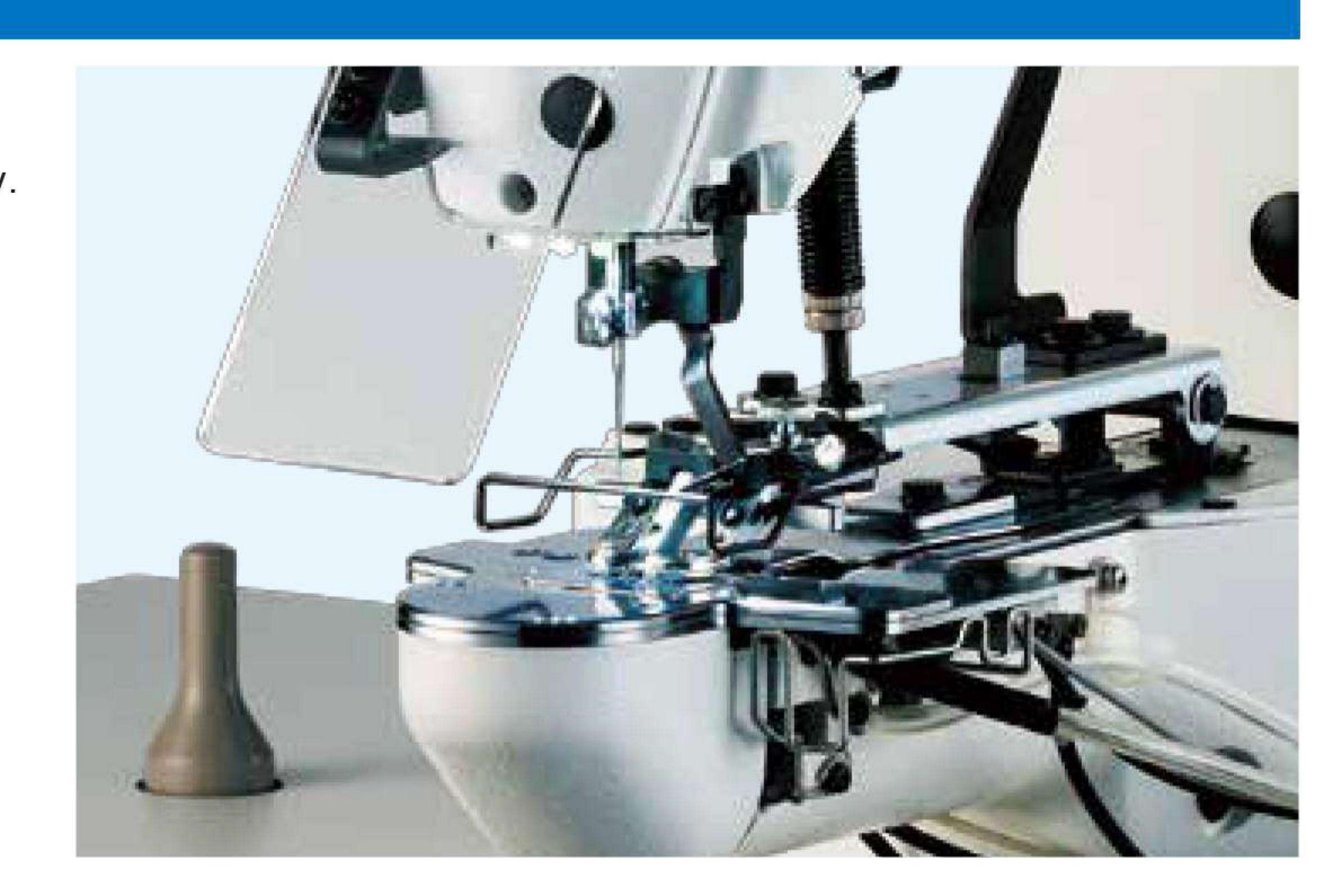
#### LK-1903BN

#### MODELS CLASSIFIED BY BUTTON SIZES

Mode	el name				LK-1	903B	N-301		LK-1903BN-302	
Button size			For	extra-small bu	utton		For small button (accessor	/)	For medium-size button	
Outside diamete that can be adju		n)	φ8~φ9	φ9~φ10	φ10~φ1	5	φ10~φ20		φ10~φ20	
Sewing size	Lengt	h (Y)	0~2.5	0~3.0	0~3.5		0~3.5		0~4.5	
(mm)	Width	(X)	0~2.5	0~3.0	0~3.5		0~3.5		0~4.5	
	Thicki (mm)	ness		1.7 (2.2)		*	1.7 (2.2) (2.7) (0.9)	*	2.0 (2.2) (2.7)	*
				MAZ158070BE	В	G	14148852	K	14149058	$\frac{1}{1}$
Button clamp jaw lever		Diaht		(MAZ158070BA)		F	(MAZ155070B0)	В	(MAZ155070B0)	E
(combination)		Right			,	_	(MAZ156070B0)	С	(MAZ156070B0)	C
	Part					_	(B25553720A0)			_
	No.			MAZ158080BB		G	14148951	K	14149157	L
		Left	1)	MAZ158080B/	A)	F	(MAZ155080B0)	В	(MAZ155080B0)	Е
						_	(MAZ156080B0)	С	(MAZ156080B0)	C
							(B25573720A0)			
Needle hole guide (mm)				1.6 (1.6) (1.8) (1.1)		(1.8)		1.6		
$\phi_{B}$ $\phi_{C}$	В			φ2.8			(φ3.5)		φ3.5	
(-)	С			φ1.6			(φ1.6)		φ2.0	
				MAZ15801000	0		(MAZ15501000)			
<del>-н-</del> А	Part N	Vo.		(14149900)			(14149603)		MAZ15601000	
							(D2426284Y00)			
Feed plate			MAZ	Z15502000 (	8.5)		MAZ15502000 ( <u>8.5</u> )		MAZ15602000 (10)	

#### LED LIGHT

The LED light can adjust the light intensity to 5 levels, and Off setting is also possible. The operator can set the brightness which is easy to work, improving work efficiency.



#### TABLE OF THE SEWING PATTERNS

$\rightarrow$	X	<b>←</b>	
	5	$\sum$	<del>\</del>
(	5 0	5	<u>Y</u>
/	_	/	I

	Pattern No.	Stitch shape			Standard length Y (mm)	No.	Stitch shape	Sewing thread (pcs.)		Standard length Y (mm)	Pattern No.	Stitch shape	thread	length	Standard length Y (mm)	Pattern No.	Stitch shape		Standard length X (mm)	length
$\rfloor [$	1.34		6-6			10.39		8-8			18.44		6			26.47	11	6-6		
	2.35		8-8			11		10-10			19.45		8			27		10-10	2.4	2 4
	3		10-10			12.40	<b>%</b>	6-6			20		10	3.4	0	28.48		6-6	3.4	3.4
ĺ	4		12-12			13.41		8-8	21		21		12			29		10-10		
	5.36	(m)	6-6	3.4	3.4	14		10-10	3.4	3.4	22		16			30.49		5-5-5		
Ī	6.37	<b>3</b> €	8-8			15.42	*	6-6			23.46		6			31		8-8-8	2.0	0.5
	7	(**)	10-10			16.43	*	8-8		24		10	0	3.4	32.50		5-5-5	3.0	2.5	
	8		12-12			17	*	10-10			25		12			33		8-8-8		
İ	9.38	(25)	6-6			※ (1) Standa	ard sewin	g lengths >	and Y giv	/en above a	are given as	suming th	at the scale	e is 100.				,		

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

#### OPTION

Mode	l name		Option	
Button size			For large button	
Outside diamete that can be adju		n)	φ15~φ32	
Sewing size	Length	1 (Y)	0~6.5	
(mm)	Width	(X)	0~6.5	
	Thickness (mm)		2.7 (3.2)	
				*
			MAZ157070BB	D
Button clamp jaw lever		Right	(MAZ157070BA)	Е
(combination)		rugiit		
	Part			_
	No.		MAZ157080BB	D
		Left	(MAZ157080BA)	Е
			<u></u>	_
Needle hole guide (mm)	A		1.4	
$\phi_{B}$ $\phi_{C}$	В		φ3.5	
(-)	С		φ2.0	
	Part N	<b>O</b> .	MAZ15701000	
Feed plate			MAZ15702000 (12.5)	

Model name	Ор	tion			
Button type	For shar	nk button			
Max. sewing speed	1,500	sti/min			
	Outside diameter	φ8~φ20			
Rutton	Diameter of hole in button	φ1.5 or more			
Button configuration	Position of hole in button	1.5mm or more			
Configuration of shank	B (m 1 3 5	A (mm)  Min Max  4 9  3 8  — 7			
Pattern No.	18, 19, 2	20, 21, 22			

Optional part for shank	button
Part No.	Name of part
14146054	Pick-up device complete
D1401M1YC0A	Needle bar (for TQ×1)
MAZ160170A0	Wiper (asm.)
40015434	Moving plate link A
14148209	Bushing
SL6030892TN (2 pcs.)	Screw
MAZ16015000	Button support link
SD0640321TP	Hinge screw
40010103	Connecting link
SL6040892TN (2 pcs.)	Screw
MAZ16021000	Needle hole guide
MTQ300B1400	Needle TQx3 #14

### LK-1903BN/BR35

Newly developed machine head, LK-1903BN is adopted. LK-1903BN/BR35 is now available.

- The machine achieves sewing speed of 2,700sti/min. The machine's starting, stopping, thread-trimming and automatic presser lifting speeds have been increased to significantly shorten total cycle time.
- 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.



LK-1903BNS-311/BR35

#### MODELS CLASSIFIED BY BUTTON SIZES

Model name			LK-1903BN-311/BR3	35	LK-1903BN-312/BR3	5
Button size			For small button		For medium-size butto	on
Outside diame			φ10~φ15		φ12~φ18	
Sewing size	Length	ı (Y)	0~3.5		0~4.5	
(mm)	Width	(X)	0~3.5		0~4.5	
	Thickr (mm)	ness	1.7 (2.2)		2.7	
				*		*
			14190458	Р	MAZ166070B0	J
Button clamp		<u>R</u>	(MAZ165070B0)	Н	. <del></del> .	
jaw lever (combination)	Part No.	Right		_		
				_		
			14190557	Р	MAZ166080B0	J
		Fe	(MAZ165080B0)	Н	<del></del>	
		eft				
				_		
			1.6		1.6	
Needle hole guide (mm)	A		(1.8)			
	В		φ3.5		φ3.5	
$\begin{array}{c c} & \downarrow & \downarrow \\ & \downarrow & \downarrow$	С		φ1.6		φ2.0	
			MAZ15501000			
-H- A	Part N	lo.	(14149603)		MAZ15601000	
Feed plate			MAZ15502000 (□8.5)		MAZ15602000 (□10)	

#### ※Parts shown in parentheses ( ) are optional. ★: Engraved marker

#### BUTTON CARRIER

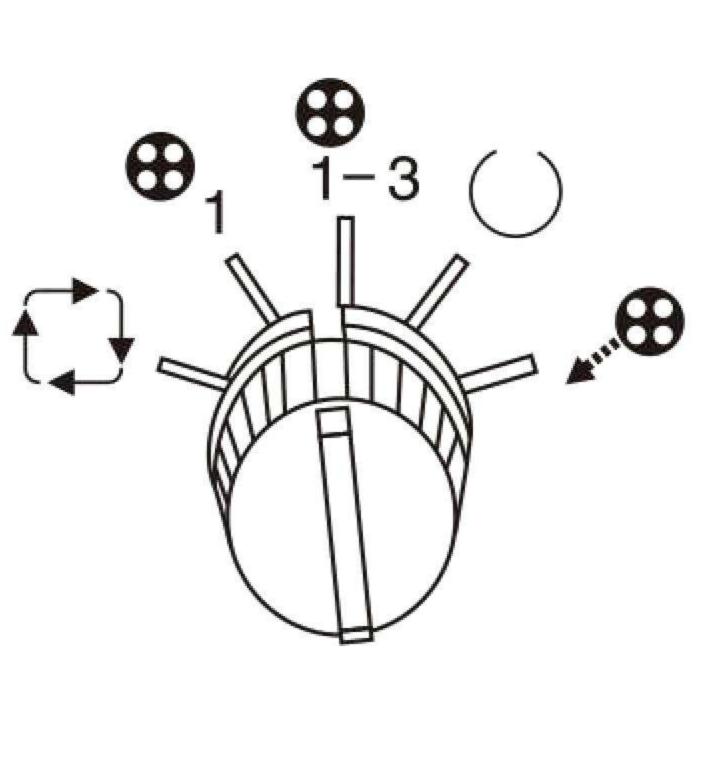
	3U I I (	ON C	ARRIEF					
		or 4-hol	ed button	1.0		or 2-hol	ed button	
Configuration of button carrier		A (°°°) B			A A B			
	Distance A(mm): Distance between holes in button	Distance B(mm): Diameter of set pin	Part No.	Code	Distance A(mm): Distance between holes in button	Distance B(mm): Diameter of set pin	Part No.	Code
				Stan	dard			
	2.6	1.0	165-57902	Α	3.2	1.2	165-58009	В
				Opti	onal		y ×	
	2.0	1.0	165-90507	Q	2.0	1.0	165-87305	E
	2.2	1.0	165-90606	R	2.2	1.0	165-87404	F
	2.4	1.0	165-88501	S	2.4	1.0	165-87503	G
	2.4	1.2	165-88600	T	2.4	1.2	165-87909	L
	2.6	1.2	165-88709	U	2.6	1.0	165-87602	Н
	2.8	1.2	165-88808	V	2.6	1.2	165-88006	М
	3.0	1.2	165-88907	W	2.8	1.0	165-87701	J
	3.0	1.5	165-89806	F1	2.8	1.2	165-88105	N
	3.1	1.0	165-87206	D	3.0	1.0	165-87800	K
	3.1	1.2	165-89004	Χ	3.0	1.2	165-88204	Р
	3.1	1.4	165-89202	200 - 100 -	3.8	1.2	165-87107	С
	3.2	Tapered	165-89905	G1				
	3.6	1.2	165-90705					
	4.0	1.2	165-89707	E1_				

#### **OPERATION PANEL (Button feeder)**

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

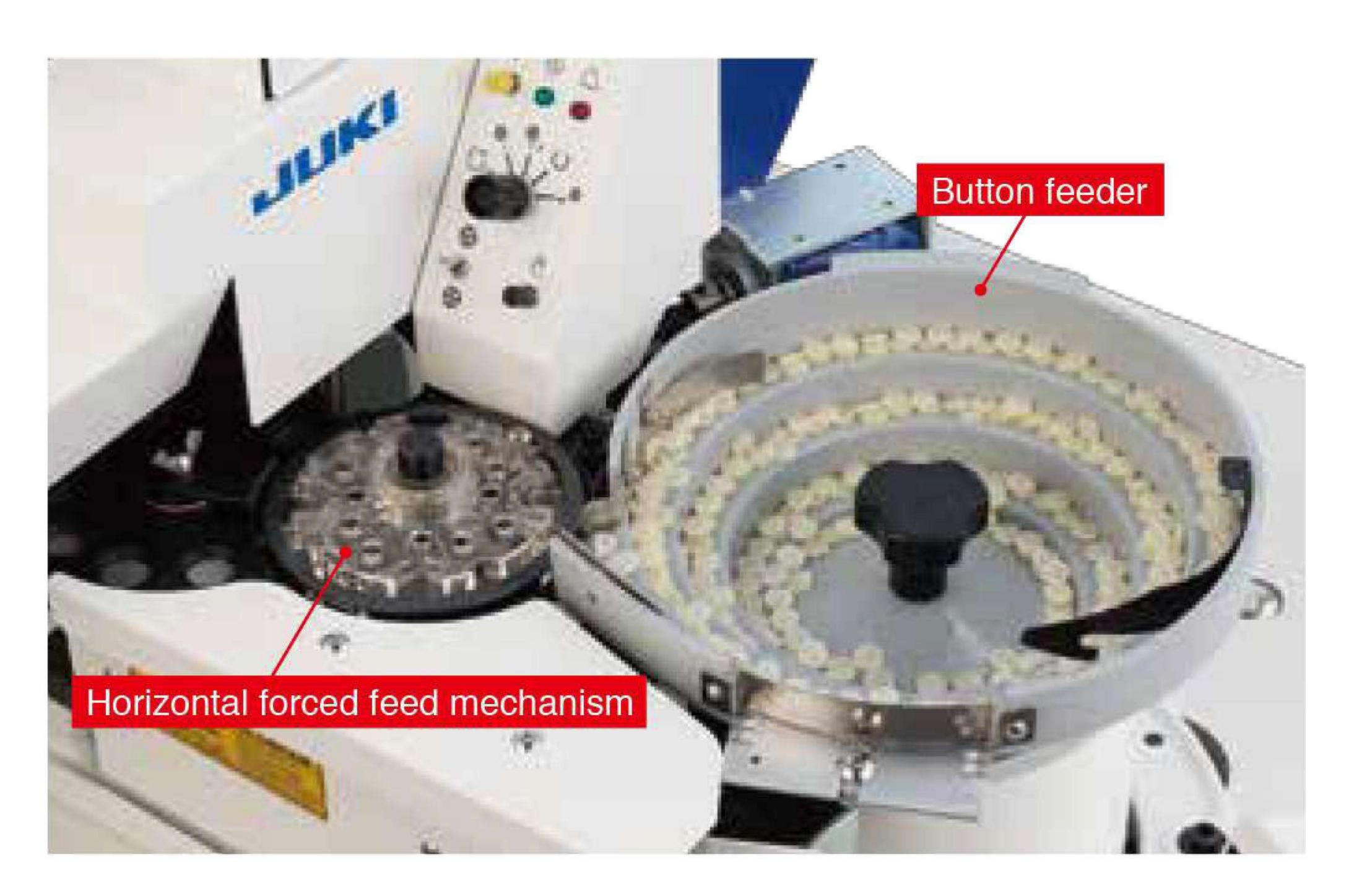
This mode is for the machine only. As button feeder will not be activated, this can be used as a standard button sewing machine.



#### Mode for small lots

1-3 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.





#### SHAPE OF BUTTON (LK-1903BN/BR35)

	Applicable button	Inapplicable carrier
Shape of button	1.2mm or more	1.2mm or less  Button without indented part (concavoconvex shape button)
Remarks	Thickness of button should be 1.8~3.5mm.	Button with thin edge may not be fed by the button feeder.

#### OPTIONS

 Applicable model
 Part No.
 Description
 Quantity

 40018334
 Solenoid for wiper (asm.)
 1

 SM6041150TP
 Screw
 2

 TA1250705R0
 Rubber plug
 1

 HX00123000C
 Cable clip
 4

 SL4041091SC
 Screw
 4

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

Model	Applicable model	Part No.	Description
Q123	LK-1903BN	MAQ123000A0	Button spacer
Q124	LK-1903BN/BR35	MAQ124000A0	(commonly used for men's wear and ladies' wear)
Z099	LK-1903BN	14134050	Button rising bar (asm.) (Attachment and removal are possible.)
	LK-1903BN/BR35	·	For thick buttons (Thickness of button should be 2.5~5.0mm.)