

## LK-1903B Series

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

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

*The world's first*

**LK-1903B** (Standard Type)

**LK-1903B/BR35** (with button feeder)

Higher productivity.  
Excellent seam quality.



LK-1903BB

# LK-1903B Series

The active tension mechanism is provided with the machine as standard.

# Higher productivity and Excellent seam quality.

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

## 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.



LK-1903BS

## 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.

## 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.

TABLE OF THE SEWING PATTERNS

Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)	Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)
1-34	①	6-6	3.4	3.4	18-44	②	6	3.4	0
2-35	③	8-8			19-45	④	8		
3	⑤	10-10			20	⑥	10		
4	⑦	12-12			21	⑧	12		
5-36	⑨	6-6			22	⑩	16		
6-37	⑪	8-8			23-46	⑫	6		
7	⑬	10-10			24	⑭	10		
8	⑮	12-12			25	⑯	12		
9-38	⑰	6-6			26-47	⑲	6-6		
10-39	⑳	8-8			27	㉑	10-10		
11	㉒	10-10			28-48	㉓	6-6		
12-40	㉔	6-6			29	㉕	10-10		
13-41	㉖	8-8			30-49	㉗	5-5-5		
14	㉘	10-10			31	㉙	8-8-8		
15-42	㉚	6-6			32-50	㉛	5-5-5		
16-43	㉜	8-8			33	㉝	8-8-8		
17	㉞	10-10							

※ (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.

MODELS CLASSIFIED BY BUTTON SIZES

Model name	LK-1903B-301			LK-1903B-301	LK-1903B-302			
Button size	For extra-small button			For small button (accessory)	For medium-size button			
Outside diameter that can be adjusted (mm)	φ8~φ9	φ9~φ10	φ10~φ15	φ10~φ20	φ10~φ20			
Sewing size (mm)	Length (Y)	0~2.5	0~3.0	0~3.5	0~4.5			
	Width (X)	0~2.5	0~3.0	0~3.5	0~4.5			
Thickness (mm)	1.7 (2.2)			1.7 (2.2) (2.7) (0.9)	2.0 (2.2) (2.7)			
				*	*			
Button clamp jaw lever (combination)	Right	MAZ158070BB		G	14148852	K	14149058	L
		(MAZ158070BA)		F	(MAZ155070B0)	B	(MAZ155070B0)	B
		—		—	(MAZ156070B0)	C	(MAZ156070B0)	C
	Left	MAZ158080BB		G	14148951	K	14149157	L
		(MAZ158080BA)		F	(MAZ155080B0)	B	(MAZ155080B0)	B
		—		—	(MAZ156080B0)	C	(MAZ156080B0)	C
Needle hole guide (mm)	A	1.6 (1.8)		(1.6) (1.8) (1.1)	1.6			
		φ2.8 φ1.6		(φ3.5) (φ1.6)	φ3.5 φ2.0			
	Part No.	MAZ15801000 (14149900)		(MAZ15501000) (14149603)	MAZ15601000			
		—		(D2426284Y00)	—			
Feed plate	MAZ15502000 (□8.5)		MAZ15502000 (□8.5)	MAZ15602000 (□10)				

※Parts shown in parentheses ( ) are optional.

※: Engraved marker

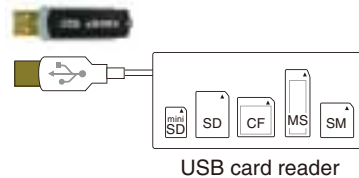
OPTION

Option	Model name	Option	
For large button	Button type	For shank button	
φ15~φ32	Max. sewing speed	1,500sti/min	
0~6.5	Button configuration	Outside diameter	φ8~φ20
0~6.5		Diameter of hole in button	φ1.5 or more
2.7 (3.2)	Configuration of shank	Position of hole in button	1.5mm or more
*			
MAZ157070BB	Pattern No.	18, 19, 20, 21, 22	
(MAZ157070BA)			
—	Optional part for shank button		
MAZ157080BB	Part No.	Name of part	
(MAZ157080BA)	14146054	Pick-up device complete	
—	D1401M1YC0A	Needle bar (for TQx1)	
—	MAZ160170A0	Wiper (asm.)	
1.4	40015434	Moving plate link A	
φ3.5	14148209	Bushing	
φ2.0	SL6030892TN (2 pcs.)	Screw	
MAZ15701000	MAZ16015000	Button support link	
MAZ15702000 (□12.5)	SD0640321TP	Hinge screw	
	40010103	Connecting link	
	SL6040892TN (2 pcs.)	Screw	
	MAZ16021000	Needle hole guide	
	MTQ300B1400	Needle TQx3 #14	



## STANDARD LIQUID CRYSTAL 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 99 different cycle sewing patterns, each of which combines a maximum of 99 different sewing patterns, can be stored in the memory.



## IP-420U Operation panel provided with programmable functions

The IP-420U is a new operation panel configured with a "input function" not available in standard panel.

- Input and edit data while observing the needle-entry points visually.
- The operator can easily check the shape of the pattern displayed on the wide liquid crystal panel.
- Make minor adjustments to data quickly and efficiently. Overall use is easier than ever before.
- The memory storage capability of the main body of the sewing machine has been dramatically enhanced. Now the USB-ready main body of the sewing machine uses many different kinds of media. In addition to the Compact Flash card, the main body of the sewing machine is provided as standard with a USB connector. Now, data can be input/output to/from various kinds of media (SD (Secure Digital Card), CF (Compact Flash), SM (Smart Media), FD (floppy disks) etc.) by means of a USB thumb device and a card reader.



\* IP-420U should be ordered as a part.  
IP-420U [Part No. 40144886]  
Panel cable asm. [Part No. 40065566]

IP-420U

# LK-1903B

Lockstitch, Button Sewing Machine 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-1903B 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-1903BS

# LK-1903BB *The world's first*

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

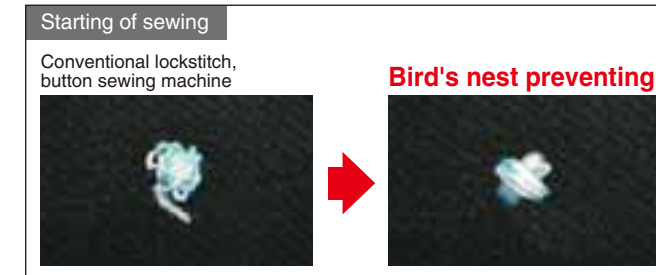
- Users who are conscious about the finished quality of products manually nip, with scissors, the thread remaining on the material after thread trimming at the end of sewing. Now, the button sewing machine with the bird's nest preventing/shorter thread remaining functions saves such users the trouble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



LK-1903BB

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."

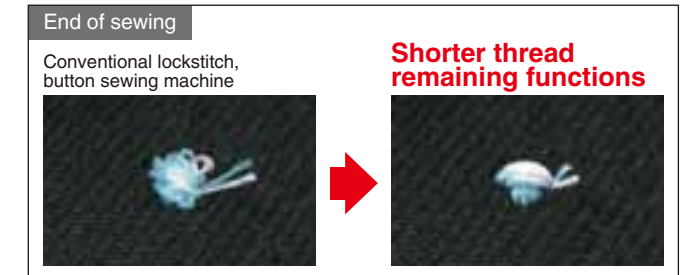


\*Use #60-80 (TEX22-30) polyester spun thread

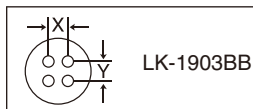
Length of thread remaining on the material at the end of sewing has been reduced to 2 mm or less\*.

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.



## TABLE OF THE SEWING PATTERNS



Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)	Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)
1-34	⊕	6-6	3.4	3.4	14	⊗	10-10	3.4	3.4
2-35	⊕	8-8			15-42	⊗	6-6		
3	⊕	10-10			16-43	⊗	8-8		
4	⊕	12-12			17	⊗	10-10		
5-36	⊕	6-6			18-44	⊕	6	3.4	0
6-37	⊕	8-8			19-45	⊕	8		
7	⊕	10-10			20	⊕	10		
8	⊕	12-12			21	⊕	12		
9-38	⊕	6-6			22	⊕	16		
10-39	⊕	8-8							
11	⊕	10-10							
12-40	⊗	6-6							
13-41	⊗	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

Model name	LK-1903BB-301			
Button size	For extra-small button		For small button (accessory)	
Outside diameter that can be adjusted (mm)	φ8-φ9	φ9-φ10	φ10-φ15	φ10-φ20
Sewing size (mm)	Length (Y)	0-2.5	0-3.0	0-3.5
	Width (X)	0-2.5	0-3.0	0-3.5
Button clamp jaw lever (combination)	Thickness (mm)	1.7 (2.2)		1.7 (2.2) (2.7) (0.9)
		MAZ158070BB G		14148852 K
	Part No.	Right	(MAZ158070BA) F	(MAZ155070B0) B
		Left	(MAZ156070B0) C	(B25553720A0) —
Needle hole guide (mm)	A	0		0
	B	—		—
Part No.	C	φ2		φ2
	A	40146821		40146821
Feed plate	40146828			

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

# LK-1903B/BR35

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

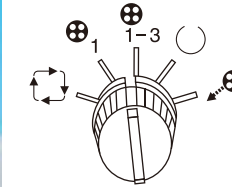
- The machine achieves sewing speed of 2,700sti/min. The machine's starting, stopping, thread-trimming and automatic presser lifting speeds have been increased to significantly shorten total cycle time.
- With our original horizontal forced feed mechanism, the button carrier sets a button in position 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-1903BS-311/BR35

## 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

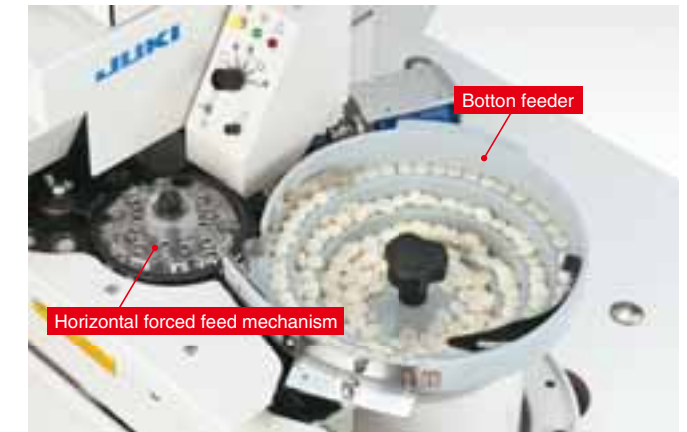
The machine and button feeder are connected and run together. It starts sewing a button by pressing a pedal, thread trimmer is activated after sewing a button, and button feeder sets the next button in position automatically. The machine repeats these operations with this mode.

### 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

Model name		LK-1903B-311/BR35	LK-1903B-312/BR35	
Button size		For small button	For medium-size button	
Outside diameter that can be adjusted (mm)		φ10~φ15	φ12~φ18	
Sewing size (mm)	Length (Y)	0~3.5	0~4.5	
	Width (X)	0~3.5	0~4.5	
Button clamp jaw lever (combination)	Thickness (mm)	1.7 (2.2)	2.7	
		14190458 (MAZ165070B0) P	MAZ166070B0 J	
	Part No.	Right	—	—
		Left	14190557 (MAZ165080B0) P	MAZ166080B0 J
			—	—
		—	—	
Needle hole guide (mm)	A	1.6 (1.8)	1.6	
	B	φ3.5	φ3.5	
	C	φ1.6	φ2.0	
Part No.		MAZ15501000 (14149603)	MAZ15601000	
Feed plate		MAZ15502000 (□8.5)	MAZ15602000 (□10)	

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

## BUTTON CARRIER

Configuration of button carrier		For 4-holed button				For 2-holed button			
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		
								Standard	
2.6	1.0	165-57902	A	3.2	1.2	165-58009	B		
Optional									
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	H		
2.8	1.2	165-88808	V	2.6	1.2	165-88006	M		
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	X	3.0	1.2	165-88204	P		
3.1	1.4	165-89202	Z	3.8	1.2	165-87107	C		
3.2	Tapered	165-89905	G1						
3.6	1.2	165-90705	H1						
4.0	1.2	165-89707	E1						

## SHAPE OF BUTTON (LK-1903B/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

### Magnet wiper

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



# SPECIFICATIONS

Model name	LK-1903BB	LK-1903B	LK-1903B/BR35
Max. sewing speed	2,700sti/min※		
Button size	Type : Round-shaped, flat button Size : $\phi 8\sim\phi 20\text{mm}$ 301 : $\phi 8\sim\phi 20$	Type : Round-shaped, flat button Size : $\phi 8\sim\phi 32\text{mm}$ 301 : $\phi 8\sim\phi 20$ 302 : $\phi 10\sim\phi 20$ OPTION : $\phi 15\sim\phi 32$	Type : Round-shaped, flat button (2-holed, 4-holed) Size : $\phi 9\sim 20\text{mm}$ For small button: $\phi 10\sim\phi 15\text{mm}$ For medium-sized button: $\phi 12\sim\phi 18\text{mm}$ (Those that are smaller than $\phi 10\text{mm}$ or larger than $\phi 18\text{mm}$ 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. 10mm	Max. 13mm	Max. 11mm
Auto-lifter	Provided as standard (stepping motor type)		
Needle thread tension	Active tension (electronic thread tension control system)		
Needle (at the time of delivery)	DPx17 (#11)	DPx17 (#14)	
Hook	Standard shuttle hook		
Number of stitches that can be stored in memory	Max. 20,000 stitches		
Number of standard patterns	34 patterns	50 patterns	
Number of data that can be input	200 patterns		
Enlarging/Reducing facility	20~200%(1% step), Pattern enlargement /reduction can be done by increasing /decreasing the stitch length		
Memory medium	Internal-organs memory		
Bobbin thread counter	Provided as standard (up/down method)		
Bird's nest preventing / Shorter-thread remaining functions	Provided	—	—
Supplying 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	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)

※ "sti/min" stands for "Stitches per Minute"  
 ※ CompactFlash™ or CFA specification compatible media.  
 ※ "CompactFlash™" is a registered trademark of SanDisk Corporation, U.S.A.  
 ※ Other company names and product names/brand names are trademarks or registered trademarks of the respective companies.

## WHEN YOU PLACE ORDERS

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

### ● LK-1903BB ● LK-1903B

Application	Code
Standard	S
Bird's nest preventing / Shorter-thread remaining functions	B

Machine head

LK1903B□□□□

Work clamp foot	Code	Button clamp jaw lever	Code
Standard	S	For extra-small, small button	301
		For medium-size button	302

Control box

MC67□□□□□□□□

Head type	Code	Power supply	Code	Operation panel	Code
Standard	0	3-phase 200~240V	E	Standard panel	SS
Bird's nest preventing / Shorter-thread remaining functions	2	200~240V	K	Option panel	IP420U
		Single-phase CE 200~240V (not provided with power switch)	N		

### ● LK-1903B/BR35

Application	Code	Work clamp foot	Code	Button clamp jaw lever	Code
Standard	S	Standard	S	For small button	311
				For medium-size button	312

Machine head

LK1903BSS□□□□/BR35□□□□S

Feed plate	Code	Power supply	Code	Panel	Code
For small button	S	3-phase 200V	J	Standard panel	S
For medium-size button	M	220V	K		
		220V	D		
		Single-phase CE 230V (not provided with power switch)	G		

※ IP-420U cannot be installed.

● To order, please contact your nearest JUKI distributor.

JUKI ECO PRODUCTS	The LK-1903B Series is an eco-friendly product which complies with JUKI ECO PRODUCTS standards for protecting the environment
	<ul style="list-style-type: none"> <li>● 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.</li> <li>● This sewing machine reduces power consumption by 15% as compared with the conventional models.</li> </ul>
	<p>For details of JUKI ECO PRODUCTS, refer to: <a href="http://www.juki.co.jp/eco_e/index.html">http://www.juki.co.jp/eco_e/index.html</a>                      ※ 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.</p>



Registered Organization : JUKI CORPORATION Head Office  
 The Scope of the Registration : The activities of research, development, design, sales, distribution, and maintenance services of industrial sewing machines, household sewing machines and industrial robots, etc., including sales and maintenance services of data entry systems.

**JUKI**  
**JUKI CORPORATION**  
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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 soyink on recycle paper.