

JUKI



LK-1903BN Series

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

**DIGITAL
SEWING
SYSTEM**

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

LK-1903BN (Standard Type)

LK-1903BN/BR35 (with button feeder)



LK-1903BN Series

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.

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 using an Android tablet or USB thumb drive.

*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.

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.

New



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

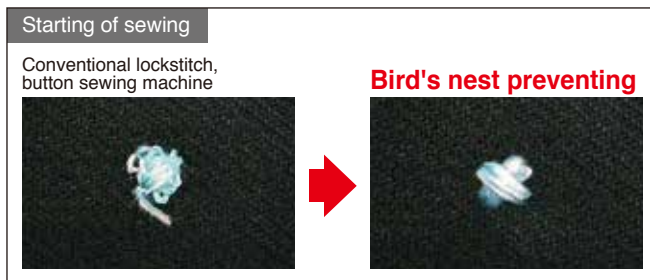
Button sewing machine with the bird's nest preventing / shorter thread remaining functions which eliminates thread nipping work

- 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.

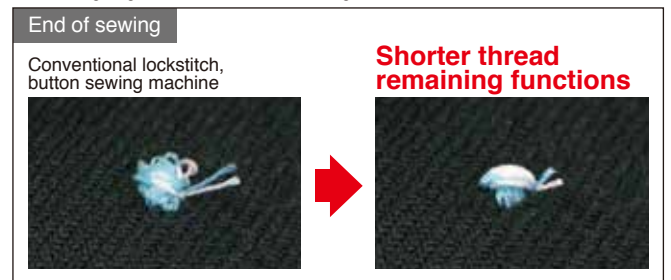
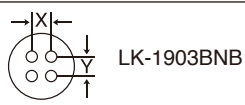


TABLE OF THE SEWING PATTERNS



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	3.4	0
5-36		6-6			18-44		6		
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-1903BNB-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	0~3.5	
	Width (X)	0~2.5	0~3.0	0~3.5	0~3.5	
Button clamp jaw lever (combination)	Thickness (mm)	1.7 (2.2)		1.7 (2.2) (2.7) (0.9) *		
				*	*	
	Part No.	Right	MAZ158070BB	G	14148852	K
			(MAZ158070BA)	F	(MAZ155070B0)	B
		Left	—	—	(MAZ156070B0)	C
			—	—	(B25553720A0)	—
Needle hole guide (mm)	A	0		0		
	B	—		—		
		C		φ2		
Part No.	40146821		40146821			
Feed plate	40146828					

※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-1903BNS

LK-1903BN

MODELS CLASSIFIED BY BUTTON SIZES

Model name		LK-1903BN-301			LK-1903BN-302				
Button size		For extra-small button		For small button (accessory)		For medium-size button			
Outside diameter that can be adjusted (mm)		$\phi 8 \sim \phi 9$	$\phi 9 \sim \phi 10$	$\phi 10 \sim \phi 15$	$\phi 10 \sim \phi 20$	$\phi 10 \sim \phi 20$			
Sewing size (mm)	Length (Y)	0~2.5	0~3.0	0~3.5	0~3.5	0~4.5			
	Width (X)	0~2.5	0~3.0	0~3.5	0~3.5	0~4.5			
Button clamp jaw lever (combination)	Thickness (mm)	1.7 (2.2)			1.7 (2.2) (2.7) (0.9)		2.0 (2.2) (2.7)		
					*			*	
	Part No.	Right	MAZ158070BB		G	14148852		K	14149058
			(MAZ158070BA)		F	(MAZ155070B0)		B	(MAZ155070B0)
			—		—	(MAZ156070B0)		C	(MAZ156070B0)
		Left	—		—	(B25553720A0)		—	—
			MAZ158080BB		G	14148951		K	14149157
			(MAZ158080BA)		F	(MAZ155080B0)		B	(MAZ155080B0)
—		—	(MAZ156080B0)		C	(MAZ156080B0)			
—		—	(B25573720A0)		—	—			
Needle hole guide (mm)	A	1.6 (1.8)			(1.6) (1.8) (1.1)		1.6		
		B			$\phi 3.5$		$\phi 3.5$		
		C			$\phi 1.6$		$\phi 2.0$		
	Part No.	MAZ15801000		(MAZ15501000)		MAZ15601000			
(14149900)		(14149603)							
—		(D2426284Y00)							
Feed plate		MAZ15502000 (□8.5)		MAZ15502000 (□8.5)		MAZ15602000 (□10)			

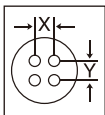
※ Parts shown in parentheses () are optional. * : Engraved marker

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

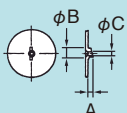


Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)	Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)	Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)	Pattern No.	Stitch shape	Sewing thread (pcs.)	Standard length X (mm)	Standard length Y (mm)
1-34		6-6	3.4	3.4	10-39		8-8	3.4	3.4	18-44		6	3.4	0	26-47		6-6	3.4	3.4
2-35		8-8			11		10-10			19-45		8			27		10-10		
3		10-10			12-40		6-6			20		10			28-48		6-6		
4		12-12			13-41		8-8			21		12			29		10-10		
5-36		6-6			14		10-10			22		16			30-49		5-5-5	3.0	2.5
6-37		8-8			15-42		6-6			23-46		6			31		8-8-8		
7		10-10			16-43		8-8			24		10			32-50		5-5-5		
8		12-12			17		10-10			25		12			33		8-8-8		
9-38		6-6																	

※ (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.

OPTION

Model name		Option	
Button size		For large button	
Outside diameter that can be adjusted (mm)		$\phi 15 \sim \phi 32$	
Sewing size (mm)	Length (Y)	0~6.5	
	Width (X)	0~6.5	
Button clamp jaw lever (combination)	Thickness (mm)	2.7 (3.2)	
		Part No.	Right
(MAZ157070BA)	E		
Needle hole guide (mm)	A	1.4	
		Part No.	Left
(MAZ157080BA)	E		
Feed plate	B	$\phi 3.5$	
	C	$\phi 2.0$	
	Part No.	MAZ15701000	



Model name		Option	
Button type		For shank button	
Max. sewing speed		1,500sti/min	
Button configuration	Outside diameter	$\phi 8 \sim \phi 20$	
	Diameter of hole in button	$\phi 1.5$ or more	
Configuration of shank	Position of hole in button		
	Pattern No.	B (mm)	A (mm)
Min			Max
1			4
3	3	8	
5	—	7	

Optional part for shank button

Part No.	Name of part
14146054	Pick-up device complete
D1401M1YC0A	Needle bar (for TQx1)
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.



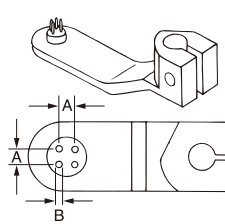
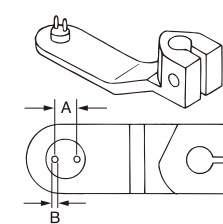
LK-1903BNS-311/BR35

MODELS CLASSIFIED BY BUTTON SIZES

Model name		LK-1903BN-311/BR35	LK-1903BN-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	
				*	
Part No.	Right	14190458	P	MAZ166070B0	J
		(MAZ165070B0)	H	—	—
	Left	—	—	—	—
		14190557	P	MAZ166080B0	J
(MAZ165080B0)		H	—	—	
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)	

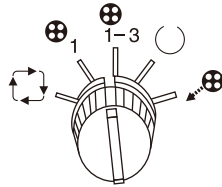
*Parts shown in parentheses () are optional. *: Engraved marker

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				

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.



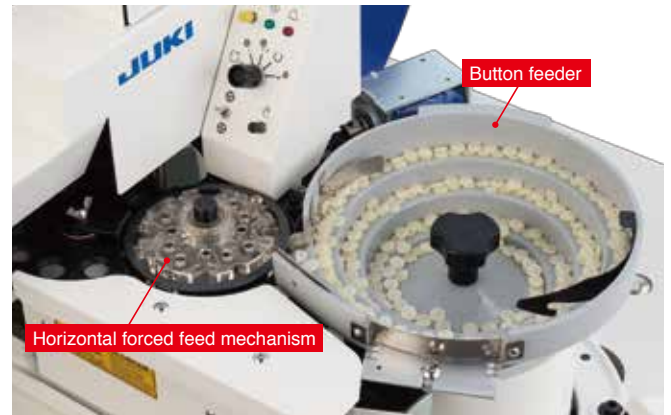
Mode for individual

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

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	<p>1.2mm or more</p>	<p>1.2mm or less</p> <p>Button without indented part (concavoconvex shape button)</p>
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-1903BN	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 (commonly used for men's wear and ladies' wear)
Q124	LK-1903BN/BR35	MAQ124000A0	
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.)

SPECIFICATIONS

Model name	LK-1903BNB	LK-1903BN	LK-1903BN/BR35
Max. sewing speed	2,700sti/min※		
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 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)

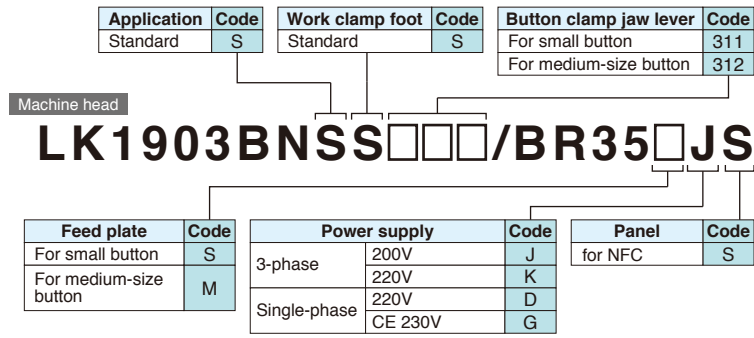
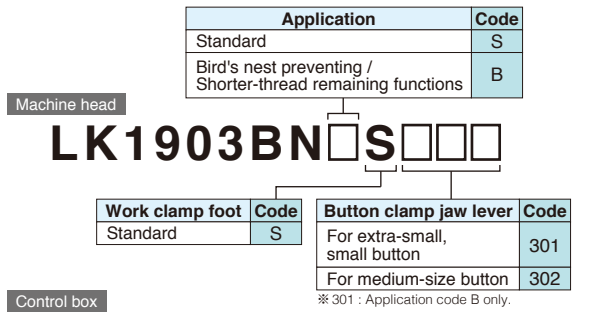
※ "sti/min" stands for "Stitches per Minute"

※ 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-1903BNB ● LK-1903BN ● LK-1903BN/BR35



● To order, please contact your nearest JUKI distributor.

JUKI ECO PRODUCTS	LK-1903BN Series is an eco-friendly product which complies with JUKI ECO PRODUCTS standards for protecting the environment.
	<p>● 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.</p> <p>For details of JUKI ECO PRODUCTS, refer to: http://www.juki.co.jp/eco_e/index.html</p> <p><small>*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.</small></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.



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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.