

**JUKI®**

# LZ-2290A Series

Computer-controlled, Direct-drive, High-speed, 1-needle, Lockstitch, Zigzag Stitching Machine



# LZ-2290A Series

A single LZ-2290A Series machine is extremely versatile and can perform many different stitching patterns.

## A single LZ-2290A Series machine is extremely versatile and can perform many different stitching patterns.

It comes in two different models, one with standard specifications and the other with an anti-material slip capability. For both models, there are two subclass models, i.e., the "minute-quantity lubrication type" and the "dry-head type", which eliminates oil stains on sewing products. You may select the best-suited model from the diversified subclasses according to your applications.

The machine is also provided with a newly-developed operation panel, the IT-100. With this operation panel, you can easily establish settings for stitch shapes and stitches, as well as conduct setup changing, thereby achieving further increased availability.



### The machine is provided with many different stitching patterns.

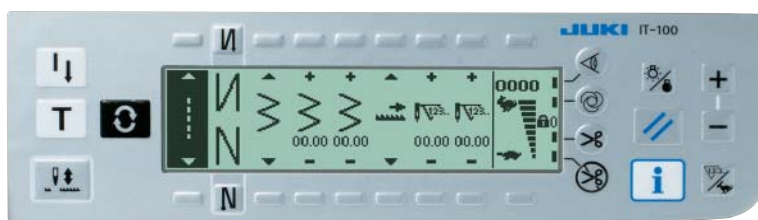
- \* The machine is provided as standard with fourteen different basic zigzag stitching patterns grouped into eight different types. You can choose the zigzag stitching pattern you want directly on the operation panel (IT-100) of the machine body. The zigzag width, needle throw position and number of blind stitches can also be easily adjusted on the operation panel.
- \* A single unit is extremely versatile and can perform straight stitching, standard zigzag stitching, 2-step zigzag stitching, 3-step zigzag stitching, scallop stitching, and blind stitching. As a result, the system is available for a far wider range of applications.

### ■ Sewing pattern

Name of pattern	Straight stitch	Standard zigzag	2-step zigzag	3-step zigzag	Scallop (left)				Scallop (right)				Blind stitch (left)	Blind stitch (right)	Custom pattern
					Standard	Crescent	Equal-width	Equal-width	Standard	Crescent	Equal-width	Equal-width			
Stitch pattern															
Number of stitches	1	2	4	6	24		12		24		12		3~250		Max. 500

### Advanced operation panel IT-100

- \* A liquid crystal display has been adopted. It displays stitch shapes, zigzag width and standard lines with pictographs and settings all together on one screen to improve operability of the panel.
- \* The machine has added capabilities that make the most out of the computer-controlled sewing machine functions, such as program stitching (constant-dimension sewing), cycle sewing and continuous sewing. With these capabilities, the machine is able to respond to sewing in various processes.
- \* Custom pattern data can be stored using the same USB memory. This enables the sharing of custom patterns, not only in one plant, but also among two or more sewing plants, by exchanging data via e-mail systems.



### Example of screen displays



Scallop stitch shape setting



Continuous stitching



Maintenance function

## Custom patterns can be created on the operation panel with ease.

\* You can quickly create an original stitching pattern on the operation panel and then try to sew it on a trial basis.

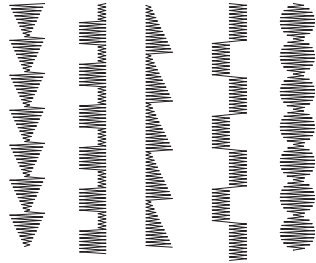
A wider variation in design enables the machine to respond to wider applications, such as foundations, ladies' wear and men's wear.

\* The machine requires neither a programming device nor ROM writer.

### ● Custom patterns

- Original sewing patterns can be quickly created and stored in memory.
- Max. 20 patterns, Max. 500 stitches / pattern.

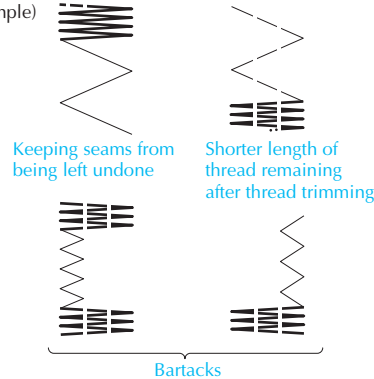
(Example)



### ● Condense custom patterns \*Automatic reverse feed function is required.

- The user can specify original condense custom patterns. This type of pattern is very effective at producing improved bartacks and keeping seams from being left undone.

(Example)



- Start and end of sewing: A maximum of 20 different patterns, with a max. of 64 steps/pattern.
- The machine, with its automatic thread trimmer, is able to leave shorter thread after thread trimming as compared with the conventional machines.



## Abundant variation in stitching.

### ● Mirroring of scallop stitches

- The machine produces beautifully finished scallop stitches on front part of a girdle, etc.
- For the scallop stitch, the starting position for sewing can be selected between the top and bottom of a scallop.

(Example)

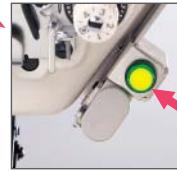
Stop the sewing machine and press mirror inversion switch.

Mirror inversion operation LED lights up.

Afterwards inversion operation

Stitching direction

Scallop: 1 pattern



Mirror inversion switch

### ● Setting the number of stitches for a blind stitching pattern

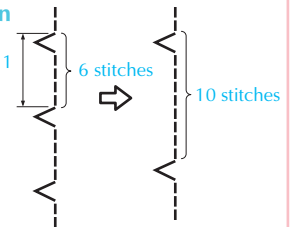
(Example)

- The user can set the number of stitches for a pattern. (3 to 250 stitches.)

Blind stitch: 1 pattern

6 stitches

10 stitches



### ● Setting of the left and right stopping positions

- The left and right stopping positions of the needle can be controlled.
- These settings are effective when performing corner stitching for label attachment or decorative stitching on the fronts of

(Example)

Left stopping position of the needle

Right stopping position of the needle

Stitching direction

Stitching direction

Stitching direction

Stitching direction

Stitching direction

Stitching direction

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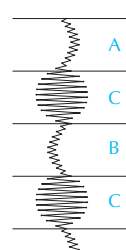
Stitching direction

Stitching direction

### ● Continuous stitching

- Custom patterns can be joined.
- Max. 10 patterns, Max. 20 steps / pattern, and Max. 500 stitches / step

(Example)

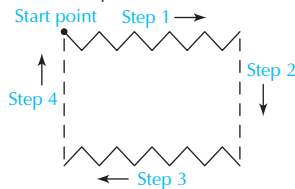


Pattern combining patterns A, C, B and C

### ● Cycle sewing

- The machine is able to sew different patterns while changing them in sequence.
- Max. 10 patterns, Max. 20 steps / pattern, and Max. 500 stitches / step

(Example)



### ● Program stitching

- As many as 20 different constant-dimension stitch patterns can be programmed. The maximum number of stitches that can be set for one step is 500.

### ● Multi-layer stitching

- It is used for reinforcing fastening stitches or bartacks.

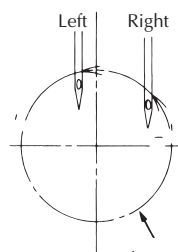


## Soft-texture seam quality.

\* The thread tension mechanism, bobbin case and feed timing have been improved to produce soft-textured seams.

\* The machine is equipped with a hook-driving shaft-offset mechanism which places the hook-rotating shaft off-center from the center of zigzag stroke of the needle. This mechanism allows the blade point of the hook to catch the needle thread every time regardless of the needle throwing direction. As a result, the machine is immune to sewing troubles such as stitch skipping and thread breakage, annoyances likely to occur with the conventional machine, especially when the needle throws to the right.

### ■ Hook-driving shaft offset mechanism



The position at which the blade point of the hook tacks the thread is almost uniform.

\* For the minute-quantity lubrication type hook, the inner hook is finished with titanium to keep it from becoming hot. The machine requires only a very small quantity of oil. This prevents oil stains on the material and the improves durability of the hook. In addition, the hook configuration is carefully designed to avoid needle breakage.



## Newly developed larger-size machine head with a long arm.

### Wider space under the arm

JUKI has developed a new high-long arm machine head one size larger than the head for the conventional lockstitch machine. With its wider area under the arm, the machine permits easy handling of the sewing material for improved operability. The shape of the jaw gives the operator a clear view of the area around the needle.

### Reduced noise and vibration

The machine comes with a more rigid and well-balanced machine head frame. This, coupled with the direct-drive method, dramatically reduces the noise and vibration of the machine and helps reduce operator fatigue.

## Excellent basic performance.

### Higher productivity

\* In the standard zigzag stitching mode with the zigzag width set to 4mm, a frequently selected operating condition, the machine sews at a top speed of 5,000sti/min, that is the world's highest available speed as a computer-controlled zigzag stitching machine, to increase in productivity.

(The dry-head type and the anti-material-slip type machines are excluded.)

### The maximum zigzag width: 10mm

\* A zigzag width of as large as 10mm is possible for all types of stitch shapes.

Sewing troubles such as stitch skipping or thread breakage will never occur even when sewing at the maximum zigzag width.

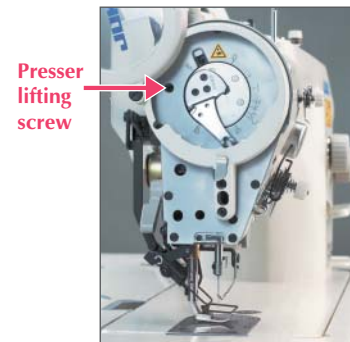
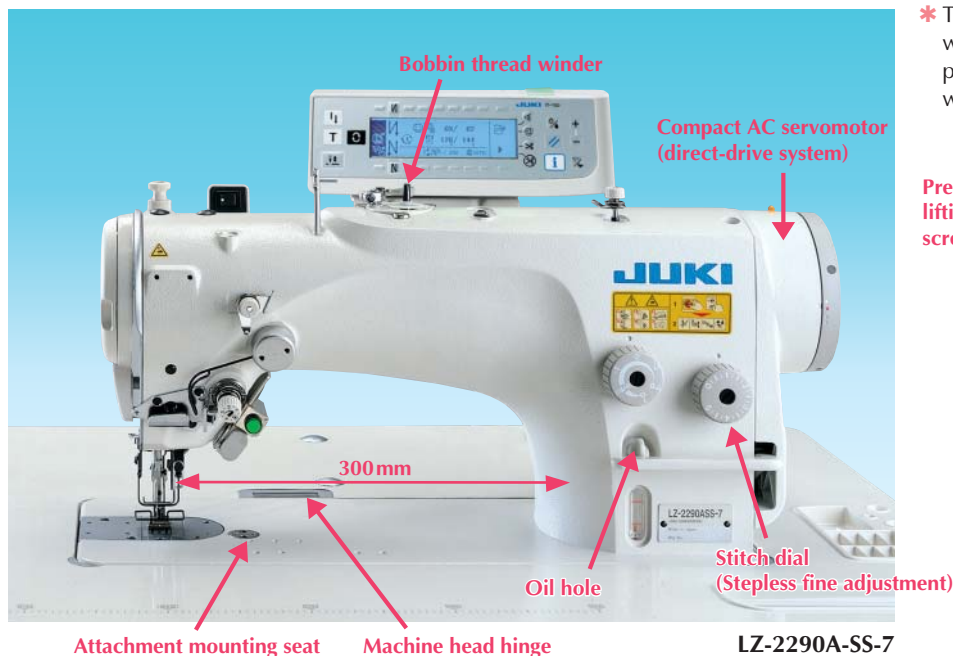
\* A gauge that supports 10mm is required.

### Increased feed amount

\* Since the machine supports the feed amount as large as 5mm, this single machine is able to handle various feed types from standard feed to coarse feed. The coarse feed is effective when sewing stretched elastic tapes in processes such as elastic tape attachment to waistbands in shorts. (For the anti-material-slip type machine, the maximum feed amount is 2.5mm.)

\* The stitch dial is a stepless adjustable type. This enables fine adjustment of the feed amount.

\* The machine is provided as standard with a micro-lifter screw. This helps prevent material slippage or damages when using elastic materials.



LZ-2290A-SS-7

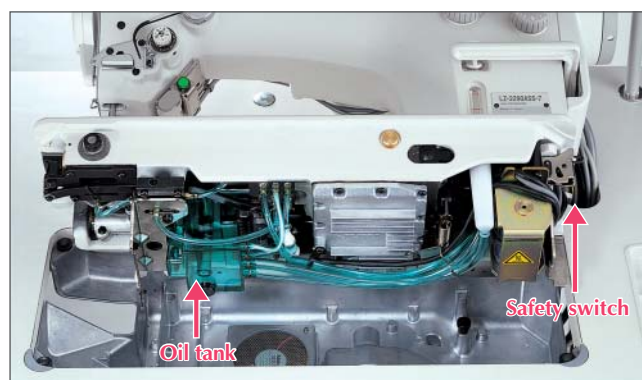
## Excellent maintainability.

\* The machine is structured without an oil pan. Oil is supplied from the oil tank installed on the machine to the hook and needle bar.

\* In addition, the oil hole is located on the machine arm. This is quite helpful to female operators; since oiling can be carried out without tilting the machine head.

\* Time and effort are conventionally required to remove the knee lifter and cover. This means the machine head can be easily tilted when cleaning the machine or performing maintenance.

\* A safety switch is mounted on the machine head. If the machine is tilted with the power on, the safety switch is activated and disables the machine operation. In this disabled condition, the machine will never run even if you depress the foot pedal.



Designed with no oil pan (minute-quantity lubrication type)

# Extensive product lineup for supporting many different processes

Type	Dry-head type		Minute-quantity lubrication type	
	Without automatic thread trimmer	With automatic thread trimmer	Without automatic thread trimmer	With automatic thread trimmer
Standard	LZ-2290A-DS	LZ-2290A-DS-7-WB	LZ-2290A-SS	LZ-2290A-SS-7-WB
	LZ-2290A-DS-0B		LZ-2290A-SS-0B	
Anti-material-slip capability	LZ-2290A-DU	LZ-2290A-DU-7-WB	LZ-2290A-SU	LZ-2290A-SU-7-WB
	LZ-2290A-DU-0B			

## Proven thread trimming mechanism.

### Computer-controlled, Direct-drive, High-speed, 1-needle, Lockstitch, Zigzag Stitching Machine with Automatic Thread Trimmer

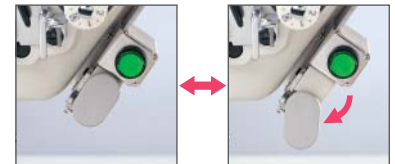
Thread trimming mechanism notable for its simple structure and extremely reliable performance

- \* The knife-sliding method employed by the thread trimmer guarantees that the thread is cut regardless of the needle throw position.
- \* The knife unit is installed under the bed slide to offer easier maintenance.



A push-button-type reverse feed switch is adopted

- \* The newly adopted push-button-type reverse feed switch allows the operator to re-position buttons at desired locations. This prevents maloperation when the operator handles the material on the machine.



The machine is equipped as standard with a needle thread feeding device

- \* The machine comes with a needle thread feeding device that feeds the needle thread by only the required length at the beginning of sewing.
- \* The needle thread feeding device prevents stitch skipping and slip-off of the needle thread. It also greatly improves workability by shortening the thread remaining at the needle after it is trimmed.



Troubles are prevented at the beginning of sewing by keeping the bobbin thread tension low

- \* The bobbin thread is retained at a low tension after thread trimming. This allows the thread to smoothly come off at the beginning of sewing, thereby preventing thread hitching and stitch gathering.

## The machine comes with a completely non-lubricated head to prevent oil stains on sewing products.

### Computer-controlled, Direct-drive, High-speed, 1-needle, Lockstitch, Zigzag Stitching Machine (dry-head type)

- \* The non-lubricated head will never scatter oil, promising cleanly finished sewing products free from oil stains.
- \* In addition, the machine and table will not be stained with oil during the gauge changing or maintenance on the machine such as cleaning.
- \* The machine offers a service speed of as high as 4,000sti/min for zigzag stitching. With this speed, the machine can be effectively used in various zigzag stitching processes.
- \* The newly developed special-race plastic hook offers increased durability and upgraded sewing capabilities. It responds beautifully to various types of thread. The hook helps the machine produce consistent high-quality, seams by eliminating changes in the thread tension caused by fluctuating oil levels.



LZ-2290A-DS-7-WB

## The machine prevents material slippage when using slippery materials.

### Computer-controlled, Direct-drive, High-speed, 1-needle, Lockstitch, Zigzag Stitching Machine (with anti-material-slip capability)

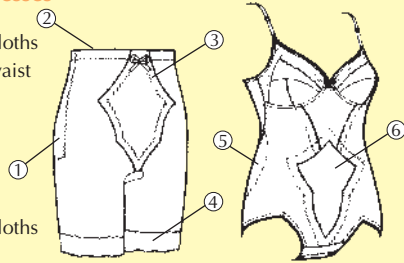
- \* Newly developed feed mechanism prevents the material slippage that is likely to occur when sewing slippery or elastic materials used for girdles or bodysuits.
- \* The machine never fails to produce beautiful, high-quality seams regardless of changes in the sewing material to fabrics such as power net and tricot.  
(\*The effects of the machine may not be obvious on some types of materials.)
- \* The machine's bottom feed method prevents material slippage. Since the LZ-2290A-SU-7 is identical with the standard model in terms of its appearance and gauge parts, workability is entirely unaffected.



LZ-2290A-SU-7-WB

#### ● Major applicable processes

- ① Attaching reinforcement cloths
- ② Attaching elastic tape to waist sections
- ③ Attaching filler cloths
- ④ Attaching lace to bottom sections
- ⑤ Attaching reinforcement cloths
- ⑥ Attaching filler cloths



### Computer-controlled, Direct-drive, High-speed, 1-needle, Lockstitch, Zigzag Stitching Machine with Automatic Thread Trimmer

#### LZ-2290A-SS-7-WB



## List of the major gauges

Max. zigzag width / Max. feed pitch	Throat plate	Feed dog	Presser foot (with finger guard)	Remarks
	<p>10041010</p>	<p>10047017</p>	<p>With a recess on the reverse side of the presser foot</p> <p>22580369</p>	
	<p>10041101</p>	<p>22580104</p>	<p>22580260 Light-in-weight type</p>	
	<p>22580005</p>	<p>22580500</p>	<p>Light-in-weight type with the front fulcrum</p> <p>22580765</p>	
	<p>22582100</p>	<p>22582209</p>		
	<p>22582704</p>	<p>22582803</p>	<p>23503154 Light-in-weight type</p>	<ul style="list-style-type: none"> <li>• Suited to sewing tasks that require frequent changes in the needle throw position.</li> </ul>
	<p>(at the time of delivery)</p> <p>22582407</p>	<p>22581508 (at the time of delivery)</p>	<p>23503253 Front fulcrum type</p>	
	<p>(at the time of delivery)</p> <p>23558208</p>	<p>23558208 (at the time of delivery: dry-head type)</p>	<p>22580864</p>	<ul style="list-style-type: none"> <li>• Light-in-weight presser foot prevents jumping at the time of high-speed sewing.</li> </ul>
	<p>22582506</p>	<p>22548804</p>	<p>22584965 Light-in-weight type (at the time of delivery)</p>	
	<p>22540009</p>	<p>22540009</p>	<p>Max. 15.6</p> <p>MAB10900B0</p> <p>Presser foot with tape guide</p>	
	<p>22545008</p>	<p>22545107</p>	<p>22545362 Light-in-weight type</p>	
<p>22545511</p>	<p>22545610</p>	<p>Light-in-weight type with the front fulcrum</p> <p>22545867</p>		

Max. zigzag width / Max. feed pitch	Throat plate	Feed dog	Presser foot (with finger guard)	Remarks
	22548705 	22548804  Max. feed amount: 1.3mm	22548960 Light-in-weight type 	
	22548507 	22548408  Max. feed amount: 2.5mm	22547962 Light-in-weight type 	• For standard zigzag stitching
	22548010 	22548119 22541601  Max. feed amount: 2.5mm Max. feed amount: 5mm		
	22549000 	22549109 22541809  Max. feed amount: 2.5mm Max. feed amount: 5mm		
	22549208 	22549307 22541700  Max. feed amount: 2.5mm Max. feed amount: 5mm		
	22546519 	22546717 22546618 	22546964 Light-in-weight type 	
	22546212 	22546410 22546311 	Light-in-weight type with the front fulcrum 22547269 	
	MAD04060000 	MAD04070000  Max. feed amount: 1.5mm	MAD040500A0 	• For attaching tape to brassieres, etc.
	22549604 	22549703  Max. feed amount: 1.5mm	22549869 Light-in-weight type 	

- Max. feed is 5 mm for the LZ-2290A-SS(-7). Since the max. feed is 2.5 mm for the LZ-2290A-SU(-7), gauges have to be selected with care.
- In addition to the above-listed ones, many different gauges and attachments for zigzag stitching are available. Please contact us for details.



## Options

Model	Part No.	Description		Features
—	400-10795	Automatic reverse feed kit		When this device is installed, the LZ-2290A-□□(without automatic thread trimmer) can perform reverse feed operation. (The mirroring switch for scallop stitching is used as the push-button-type reverse feed switch.)
—	400-03640	Optional switch kit		This handy switch is used to control various functions*. It is most effective when operating the machine in a standing position. (*Needle up/down correction, 1-stitch correction, reverse-stitch correction, auto lifter and thread trimmer, etc.)
AK121	GAK-A21000B0	Auto-lifter (pedal-driven)		—
—	D1501-583-H00	Presser bar	Presser foot connecting components (Replaceable presser bar)	The aforementioned parts are used when a lockstitching type presser foot is installed on the machine.
	D1502-583-H00	Presser connecting rod		
—	B1551-586-000	Presser foot connecting foot	Presser foot connecting components	
	SS-7090910-TP	Screw		
—	225-26578	Hard-point hook		The blade point of this hook prevents abrasion.

### ● AK121 Auto-lifter (pedal-driven)



### ● Non-rotary bobbin

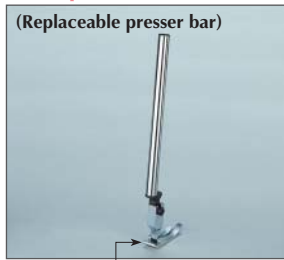


The non-rotary bobbin eliminates irregular stitches which have a tendency to occur at some sewing speeds and bobbin-thread tension fluctuations which have a tendency to occur according to the bobbin thread remaining on the hook.

Since the bobbin thread is fed without rotating the bobbin, the bobbin never idles.

★The non-rotary bobbin requires an exclusive hook, bobbin and bobbin case.

### ● Presser foot connecting components



\*Place a separate order for the presser foot

## When you place orders

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

### ● Without automatic thread trimmer

Machine head type	Code	Type	Code
Standard	S	Standard	S
Dry-head	D	Anti-material-slip type	U

LZ2290A □ □ □ □

Automatic reverse feed function	Code
Not provided	/
Provided	OB

For LZ-2290A-SU (anti-material-slip capability), select "Not provided."

### ● With automatic thread trimmer

Machine head type	Code	Type	Code
Standard	S	Standard	S
Dry-head	D	Anti-material-slip type	U

LZ2290A □ □ 7 □ □ □ □ □ □ □ □

Wiper/Automatic reverse feed function		
Wiper	Automatic reverse feed function	Code
Provided	Provided	WB
Not provided	Provided	OB

Auto-lifter		Code
Not provided		/
Auto-lifter (pedal-driven)		AK121

● To order, please contact your nearest JUKI distributor.

## ■ Specifications

Machine head type		Dry-head type		Minute-quantity lubrication type	
Model name	Without automatic thread trimmer	LZ-2290A-DS	LZ-2290A-DU	LZ-2290A-SS	LZ-2290A-SU
	With automatic thread trimmer	LZ-2290A-DS-7	LZ-2290A-DU-7	LZ-2290A-SS-7	LZ-2290A-SU-7
Type		Standard	Anti-material-slip capability type	Standard	Anti-material-slip capability type
Max. sewing speed		4,000sti/min*		5,000sti/min*	
		(for standard zigzag stitching, the zigzag width has to be set to 5mm or less.)		(for standard zigzag stitching, the zigzag width has to be set to 4mm or less.)	
Max. zigzag width		10min (in increments of 0.1min)			
Needle throw mechanism		Computer-controlled			
Max. Stitch length		5.0mm	2.5mm	5.0mm	2.5mm
		Stepless fine adjustment			
Lift of the presser foot		By hand: 5.5mm/By knee: 10mm			
Hook		Exclusive no-lubricating hook (plastic hook with special-purpose race surface)		DP hook (with titanium-treated inner hook)	
Thread take-up		Rotary type			
Needle (at the time of delivery)		438(Nm75), DPX5(#10)			
Number of patterns for standard stitching		8 types/14 patterns			
Custom pattern memory capacity	Internal memory	Max. 20 patterns			
	Extended memory	Max. 999 patterns			
Max. number of stitches		500 stitches/pattern			
Continuous stitching pattern		Max. 10 patterns, 20 step, 500 stitches/step			
Input function of the main unit		Provided as standard (operation panel: IT-100D)			
Bobbin thread winder		Built-in machine head			
Machine head drive		Compact AC servomotor (direct-drive system)			
Lubrication		No lubrication		Minute-quantity lubrication to needlebar and hook (no oil pan system)	
Lubricating oil		—		JUKI New Defrix Oil No.1 (equivalent to ISO VG7)	
Distance from needle to machine arm		300mm			
Bed size		517mm×178mm			
Power requirement/Power consumption		Single-phase 100~120V, 200~240V, 3-phase 200~240V/Power rating 600VA			
Total weight		98kg (without automatic thread trimmer) 100kg (with automatic thread trimmer)			

\* "sti/min" stands for "Stitches per minute"

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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.



#### JUKI CORPORATION HEAD OFFICE

Juki Corporation operates an environmental management system to promote and conduct the following as the company engages in the research, development, design, sales, distribution, and maintenance of industrial sewing machines, household sewing machines, industrial robots, etc., and in the provision of sales and maintenance services for data entry systems:

- (1) The development of products and engineering processes that are safe to the environment
- (2) Green procurement and green purchasing
- (3) Energy conservation (reduction in carbon-dioxide emissions)
- (4) Resource saving (reduction of papers purchased, etc.)
- (5) Reduction and recycling of waste
- (6) Improvement of logistics efficiency (modal shift and improvement of packaging, packing, etc.)