

## SPECIFICATIONS

Model name	LH-4578CFF	LH-4578CFS	LH-4578CFS-7	LH-4588CFS-7	LH-4578CFG-7	LH-4588CFG-7
Specification	Full digital					
Application	Foundation	Medium-weight		Jeans and heavy-weight materials		
Corner stitching (Organized split needle bar mechanism)	Not provided		provided	Not provided	provided	
Lubricating system	Semi-dry / Hook section: Minute-quantity lubrication (tank system)					
Feed system	Needle feed					
Max. sewing speed	3,000sti/min*					
Max. stitch length	4mm	5mm		7mm		
Thread take-up lever	Slide type					
Needle bar stroke	33.4mm					
Needle thread tension	Independent right and left active tension mechanism					
Active presser foot	Standard					
Lift of the presser foot (max.)	13mm					
Multilayered portion detection	Option	Standard				
Knee lifter	Option					
Reverse feed stitching lever	Not provided		Standard			
Needle	DPx5 #10 (#9~#16)	DP x 5 #14 (#9~#16)		DP x 5 #21 (#16~#23)		
Thread used	#80 - #30			#30 - #3 (for #8 - #3, bobbin thread count should be #20)		
Hook	Vertical-axis large hook (1.8 - fold )					
Free space under the arm	120 mm (height) x 266 mm (distance from machine arm to needle) x 87 mm (height of the jaw section)					
Lubricating oil	JUKI New Defri x Oil No.1 (Equivalent to ISO VG7)					

\* sti/min is the abbreviation for "stitches per minute"

## LH-4500C Series

Semi-dry head, 2-needle Lockstitch Sewing System

Inspire the Knowledge in Sewing Adjustment

Epoch-making Sewing Systems in history



LH-4578CFS-7



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.

Semi-dry head, 2-needle Lockstitch Sewing System

# LH-4500C Series

Digital sewing system proposes the production process added with a computerized new value to all the people who engage in production.

Semi-dry head, 2-needle Lockstitch Sewing System

# LH-4500C Series



Model name(Top): LH-4578CFS-7 / (Bottom): LH-4588CFG-7

## Active tension mechanism is adopted

Seam quality is improved by introducing the separately-driven right and left active tension mechanisms.

- The needle thread tension is automatically corrected according the sewing speed. Consistently seam quality is, therefore, achieved regardless of changes in sewing speed.
- The needle thread tension is automatically corrected according to the remaining amount of bobbin thread. Seam quality is, therefore, stabilized even when the remaining amount of bobbin thread has reduced.
- In the case of using the automatic needle thread tension correction feature according to the remaining amount of bobbin thread, the bobbin-thread change notification signal is provided to warn the operator when the remaining amount of bobbin thread has reduced to the predetermined level.



## Active presser foot mechanism is adopted

Thanks to the adoption of the active presser foot, the presser foot pressure can now be corrected according to the sewing speed.

## Multilayered portion detection device (S/G type: Standard equipment, F type: Option)

The sewing machine is provided as standard with the multilayered portion detection device. This device contributes to the realization of stable pitch / well-tensed seam when sewing the multilayered portion. Since the sewing correction can be respectively set the multilayered portion run-on portion and for the top of multilayered portion, stitch gathering at the multilayered portion can be improved.



## Corner stitching capability has been improved (only for the LH-4588C)

Changeover from the normal stitching to the corner stitching is carried out semi-automatically using the lever while ensuring ease of operation. The operator only needs to input data on the needle gauge/stitching angle through the operation panel. Then, the operator can start the corner stitching only by operating the lever during sewing. Thereafter, the sewing machine automatically changes the sewing mode between the normal stitching and the corner stitching. This means that even the inexperienced operator can produce consistent seam quality while improving productivity. In addition, the problem that the seam inside the corner stitching floats<sup>1</sup> can be solved by the active - tension correction function<sup>2</sup>.



\*1 Seams where the inside of the corner stitching has floated \*2 Active tension setting screen

## Reduction of setup changing time

- A large hook of 1.8-fold capacity (as compared with the standard size hook) is adopted. As a result, frequency of thread changing is reduced in half. This is the world's first sewing machine not only for jeans and heavy-weight materials, but also for foundation and medium-weight materials that is provided with a large hook. This sewing machine provides further stable seam quality.
- Motor-controlled horizontal feed is introduced. Stitch pitch can be set on the operation panel.
- Reduction in time required for adjustment of hook timing  
Hook timing adjustment is required in the case of changing the needle gauge. The time required for this adjustment is reduced. Adoption of the hook timing adjustment mode that can be activated by operating the operation panel as well as new hook driving shaft saddle achieves substantial reduction in workload required at the time of changing the needle gauge. Needle guard of the hook can be adjusted with screw with ease.

### Hook timing adjustment mode



Hook driving shaft saddle

Change in needle gauge

Needle guard adjustment

# Various digitalized functions

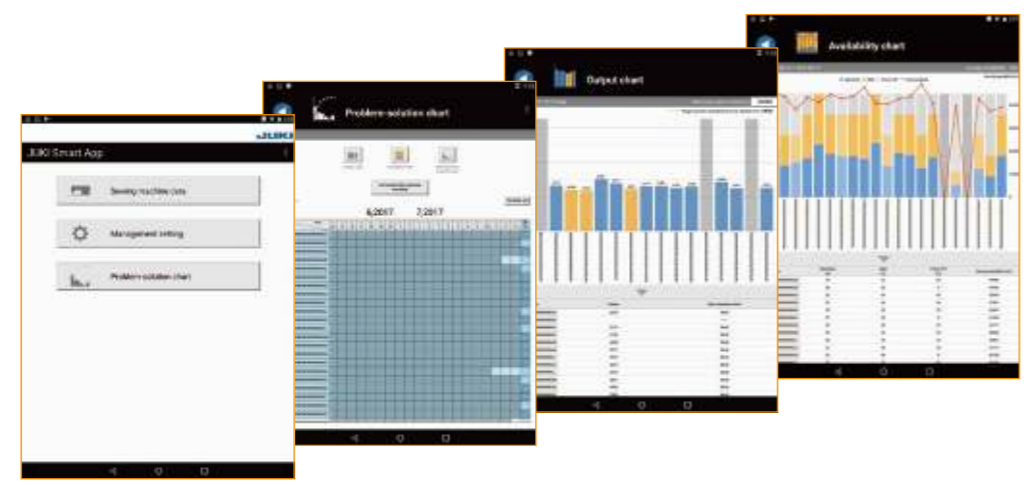
## Data and sewing machine management with IoT (Internet of Things)

A "Two-way" contactless communication for parameter adjustment data can be conducted with the sewing machine by a commercial Android terminal. This feature allows sewing machines in a sewing line to be uniformly set and status checked quickly, thereby contributing to stabilization in product quality. Control panel is standardized with USB ports, promising simplicity in data management and system updates.



## JUKI Smart APP allows you to send and confirm various data

In the application, there are items of management setting (terminal registration), sewing machine data (sewing data), problem-solution chart. In the problem-solution chart, we can generate production graphs, the availability chart, etc. for each acquired sewing machine data so it can be used for checking the current situation and analyzing it.



\*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.

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

\*N-Mark is the trademark or registered registered mark of NFC Forum Inc. in the US and other countries.

## Work environment

### Operator fatigue reduction

For the LED hand light, the improved toning function with two additional colors (white / light bulb color) is provided. This LED hand light helps reduce the operator's eye fatigue who is engaged in sewing work for a long time.



Mixed color      White      Light bulb color

## Energy-saving effect

### Automatic OFF function of the operation-panel backlight

The operation-panel light can be turned OFF after a lapse of the preset time. can be automatically turned OFF. (The setting is from 1 to 20 minutes.)

### Sleep mode (Automatic power-OFF function)

If no operation is carried out for a predetermined period of time, power supply such as motor can be turned off. (The setting is from 1 to 50 minutes.)

\*These options can be set up on the operation panel.

## Reduction in noise and vibration

### Reduction in power consumption

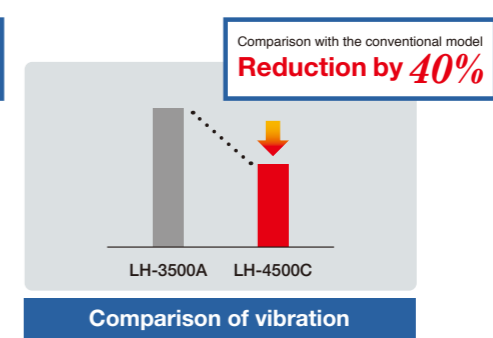
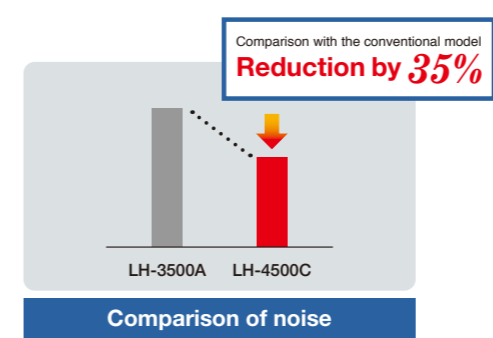
Since the LH-4500C is provided with a compact AC servomotor, optimized presser foot lifting control method and the actuator with increased power efficiency, its power consumption is reduced by 30.8 % as compared with the LH-3500A. In addition, the power consumption during standby state is reduced by 50.8 % due to the operation panel screen on which display can be turned OFF.

### Reduction in noise / vibration

Noise / vibration produced by the LH-4500C is reduced by various improvements such as the adoption of 1/2 opener system. The LH-4500C provides the work environment that helps reduce the operator's fatigue.



Bobbin case opening lever (open)      Bobbin case opening lever (close)



Conditions: 3,000 sti/min, Stitch length 3.0mm

JUKI ECO PRODUCTS	The LH-4500C 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: <a href="https://www.juki.co.jp/en/company/eco">https://www.juki.co.jp/en/company/eco</a></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>

## Large hook (1.8-fold capacity hook) is adopted for foundation type and medium-weight type

A larger hook (1.8-fold capacity hook) is adopted for foundation type that use thin threads and for medium-weight type. This is the world's first use of a large hook (1.8-fold capacity hook) for foundation type and medium-weight material type. As a result, the frequency of thread changing is reduced by approximately 40%, the work hours are reduced and the operator's fatigue is reduced. In addition, the bobbin thread remaining amount correction function of this machine contributes to more consistent seam quality.

### Example of brassier tape attaching process

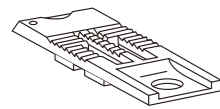
Type of hook	Large hook (1.8-fold capacity hook)	Regular hook
Amount of thread wound on a bobbin / time	108m	60m
Number of times of bobbin changing / day	11 times	19 times
Number of times of bobbin changing / month	550 times (two bobbins)	950 times (two bobbins)

• 8 hours / day; 25 days / month; Replacing a bobbin requires approximately one minutes.

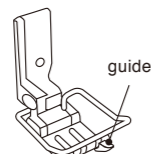
### Tape attaching gauge LH-4578CFF: For foundation

The tape attaching gauge that is best-suited to the foundation tape attaching process is now standard equipment. (Tape attaching throat plate, Presser foot with guide, Sliding plate with groove)

Also, various sizes are available as optional parts.



**Tape attaching throat plate**  
This throat plate has a recess on the operator side to help smoothly guide the tape to be attached.

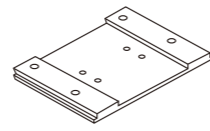


**Presser foot with guide**

#### Part number

inch	mm	Tape attaching throat plate	Presser foot with guide
1/8	3.2	40232772	22647051
3/16	4.8	40232774	22647150
7/32	5.6	40232775	22647259
1/4	6.4	40221496	22647358
9/32	7.1	40232776	22647457
5/16	7.9	40232777	22647556

• For the foundation specifications, the above 1/4 inch (6.4 mm) gauge is standard equipment.



**Bed slide (this side):**  
Part number 23206709

The bed slide reduces the height when securing the tape attaching holder.

## OPTION

### Tape cutter device (AT-45)

This tape cutter helps increase productivity in processes such as the tape sewing process where the thread trimmer cannot be used and a pair of scissors is used instead.

- The AT-45 tape cutter is a motor-driven device. Therefore, its operating noise is considerably lower than that of the air-driven tape cutter.
- The tape cutter does not require air piping. This means that you can move the sewing machine as you like in the case of changing the workshop layout.
- The tape cutter is able to cut the tape short just behind the presser foot (2.2 mm away from center of the presser foot bar).
- Since the height of the standby position of the knife is 25 mm above the throat plate surface, you do not need to worry about the product being caught by the knife.
- The tape cutter is provided with a Safety control function. The safety device prevents the tape cutter from operating while the sewing machine is in operation. Therefore, the tape cutter will never damage the product by mistake.
- Three different operating methods are available. Select one from them; i.e., by pressing the touch-back switch, by depressing the back part of the pedal and by operating the external input switch (part number: 40232800).



Device name	Device No.
AT45AK (Single phase 200~240V)	40246381
AT45AD (3-phase 200~240V, Single-phase 110V)	40252490*
AT45AN (Single phase 200~240V(CE))	40253196*

\*To be available in the near future

Coad	Needle gauge size		Throat plate	
	inch	mm	Standard	with tape guide
D	3/16	4.8	40240834	40246475
E	7/32	5.6	40240833	40246476
F	1/4	6.4	40240832	40246477
G	9/32	7.1	40240835	40246478
H	5/16	7.9	40240836	40246479

• Throat plate is not supplied with the main body of the AT-45 tape cutter. It is therefore necessary to separately place an order for the throat plate given in table as shown above.  
• Please note that this needle plate cannot be attached to a sewing machine with automatic thread trimmer.

## WHEN YOU PLACE ORDERS

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

### Machine head

- without automatic thread trimmer

L H 4 5 7 8 C F  F 0 B

Digital Specifications	Seam application	Code	Needle gauge	Code	Nipper and one-touch type reverse feed		Code	Option	Code
Full digital type	Foundation	FF	6.4mm (1/4)	F	Nipper	One-touch type reverse feed		Multilayered portion detection device	S
	Medium-weight	FS			Not Provided	Provided	0B	Not provided	-

\*Seam application "FS" is available for "Multilayered portion detection device" only.

- with automatic thread trimmer

L H 4 5  8 C F  F 7  B

Machine head	Code	Digital Specifications	Seam application	Code	Needle gauge	Code	Nipper and one-touch type reverse feed		Code
Large hooks	7	Full digital type	Medium-weight	FS	6.4mm (1/4)	F	Nipper	One-touch type reverse feed	
Organized split needle bar, large hooks	8		Jeans and heavy-weight	FG			Not Provided	Provided	0B
							Provided	Provided	NB

### Needle gauge size

[○: A gauge designed for factory-installation at delivery. △: A gauge available as a part.]

Code	Needle gauge		Seam application					
	inch	mm	LH-4578CF	LH-4578CF	LH-4578CF-7	LH-4588CF-7	LH-4578CF-7	LH-4588CF-7
			F		S		G	
A	3/32	2.4						
B	1/8	3.2	△	△	△	△	△	△
C	5/32	4.0		△	△	△	△	△
D	3/16	4.8	△	△	△	△	△	△
E	7/32	5.6	△	△	△	△	△	△
F	1/4	6.4	○	○	○	○	○	○
G	9/32	7.1	△	△	△	△	△	△
H	5/16	7.9	△	△	△	△	△	△
K	3/8	9.5		△	△	△	△	△
W	7/16	11.1		△	△		△	
L	1/2	12.7		△	△	△	△	△
M	5/8	15.9		△	△	△	△	△
N	3/4	19.1		△	△	△	△	△
P	7/8	22.2		△	△	△	△	△
Q	1	25.4		△	△	△	△	△
R	1-1/8	28.6		△	△		△	
S	1-1/4	31.8		△	△		△	
T	1-3/8	34.9		△				
U	1-1/2	38.1		△				

• Refer to the Parts List for details

### Control box

S C 9 5 6 B

Power supply	Code
Single-phase 100~120V	S
3-phase 200~240V	D
Single-phase 200~240V	K
Single-phase 200~240V (for CE)	N
Single-phase 200~240V (for China)	U