

# AMS-221ENTS3020

[Sewing area : 300mm(X) × 200mm(Y)]

Computer-controlled Cycle Machine with Input Function  
(For 2-color-thread sewing)

# JUKI



Two-color stitching is possible by one machine



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# AMS-221EN TS3020

## SPECIFICATIONS

| Model name  | AMS-221ENTS3020   |
|---|---|
| Application   | 2-color-thread sewing   |
| Sewing area   | Monolithic feeding frame  |
|   | Pneumatic feeding frame (lifting amount: 30mm)  |
| Max. sewing speed                                   | 2,500sti/min*   |
| Sewing area   | X : 300mm × Y : 200mm   |
| Stitch length                                       | 0.1~12.7mm (0.05mm step)  |
| Needle bar stroke                                   | 41.2mm  |
| Lift / Stroke of the intermediate presser           | Lifting amount: 20mm / Stroke: Standard 4mm (0~10mm)  |
| Variable lower position of the intermediate presser | Standard 0~3.5mm (max. 0~7.0mm)   |
| Needle  | DPx17 (#18)   |
| Thread  | #50~#20   |
| Hook  | Double-capacity shuttle hook  |
| Storage of pattern data in the memory               | Main-body memory : Max. 500,000 stitches, 999 patterns (max. 50,000 stitches / pattern)   |
|   | External media : Max. 50,000,000 stitches, 999 patterns (max. 50,000 stitches / pattern)  |
| Enlarging / Reducing facility                       | 1~400% (0.1% step), Pattern enlargement / reduction can be done by increasing / decreasing either stitch length or the number of stitches |
| Bobbin thread / Product counter                     | Up / Down system (0~9,999)  |
| Lubrication   | Semi-dry / hook section: minute-quantity lubrication (tank system)  |
| Lubricating oil                                     | JUKI New Defrix Oil No.2 (equivalent to ISO VG32)   |
| Sewing machine motor                                | AC servomotor 550W (direct-drive system)  |
| Power requirement / Power consumption               | Single-phase, 3-phase 200~240V/450VA  |
| Compressed air / Air consumption                    | 0.6MPa, 2.8dm <sup>3</sup> /min (ANR)   |
| Dimensions / Weight                                 | 1,200mm(W) × 1,000mm(D) × 1,200mm(H) (thread stand is not included), 210kg  |

\*Stitch length is 4mm or less for the AMS-221EN.  
\*sti/min stands for "Stitches per Minute."

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★CompactFlash™ is a registered trademark of SanDisk Corporation, U.S.A.  
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★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:

| Application           | Code | Feeding frame type      |                          | Code | Sewing area       | Code |
|-----------------------|------|-------------------------|--------------------------|------|-------------------|------|
| 2-color-thread sewing | T    | Pneumatic feeding frame | Monolithic feeding frame | S    | X:300mm - Y:200mm | 3020 |

**AMS221ENTS3020SZ□□□□SF**

| Subclass | Code  | Power supply |                               | Code   | Operation panel         | Code | Pedal switch                                    | Code |
|----------|-------|--------------|-------------------------------|--------|-------------------------|------|---|------|
| Standard | 5000  | 3-phase      | 200~240V                      | D      | Standard panel (IP-420) | S    | PK 2-pedal unit (with a mechanical valve pedal) | F    |
| Subclass | 5001~ | Single-phase | 200~240V<br>200~240V (for CE) | K<br>N |                         |      |   |      |

● To order, please contact your nearest JUKI distributor.

JUKI ECO PRODUCTS

The AMS-221ENTS3020 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](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.



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**  
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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.

# AMS-221EN TS3020

Two-color stitching is possible by one machine

This machine (AMS221ENTS) for two-color stitching has been developed to enable two-color stitching (with two kinds of thread which are different in color)

Possible difference in position of the sewing product which can be caused by re-placing it on the sewing machine in a different process is eliminated, thereby increasing the productivity. It is suitable for sports shoes, bags and car seats such as the topstitch and parts sewing, etc.

The different process is required to change the thread in the case two different-in-color threads are used for sewing. The new model AMS221ENTS3020 is able to perform sewing using two different-in-color threads only by placing the sewing product on this sewing machine once.

The sewing operator can check the color of thread which is used with the operation panel.



## Two-color stitching is possible by changing over the needle bar.

- In the case where a needle-bar changeover command is entered into a sewing pattern, the sewing machine will stop at the command position, automatically change over the needle bar and re-start sewing over the needle bar and re-start sewing with the second color thread (second kind of thread).
- The sewing operator can check the color of thread which is used with the operation panel.



## Thread retaining mechanism which clamps the thread without fail

- For the needle thread changeover function, this sewing machine is provided with a needle thread suction and clamp mechanism which is not found on competitors' sewing machines. The needle thread suction and clamp mechanism clamps the thread of the needle which is at rest to prevent it from being caught by the needle which is being used for sewing. In this way, the mechanism prevents entanglement of the two threads without fail. This mechanism is also effective in preventing slip-off of the thread at the beginning of sewing.



## Thread presser mechanism

- The sewing machine is provided with a thread presser mechanism which clamps the thread of the inactive needle under the thread take-up lever to prevent the thread from slipping out of the needle eyelet when the thread take-up lever is operating.



## The operating time is reduced

- Previously, sewing a sewing product with two kinds of thread which are different in color required the operator to change the sewing thread or to re-place the sewing product on a different sewing machine. This latest model sewing machine is able to perform sewing with two different-in-color threads (i.e., two kinds) simply by placing the sewing product on this sewing machine once. This helps significantly reduce the operator's operating time. Furthermore, possible subtle differences in position of the sewing product which can be caused by re-placing it on a different sewing machine are eliminated, thereby improving and/or stabilizing the seam quality.
- Needle bar switching speed is very fast.

## Needle-bar changeover speed is fast.

- The needle-bar changeover speed is the fastest in the world which reduces the loss of cycle time at the time of needle-bar changeover, thereby increasing the productivity.

## Safety mechanism

- The sewing machine is provided with the wiper-returning detection sensor. It works to cause an error in case of needle thread trimming failure to prevent thread entanglement after the occurrence of the error. In addition, the sewing machine is provided with two optical sensors which respectively work to detect the flow of the two threads. This ensures highly-accurate thread breakage detection.

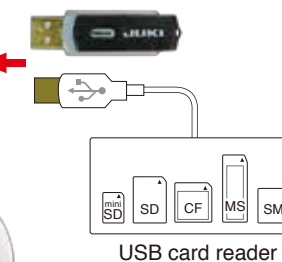


## Operation panel provided with programmable functions IP-420 (provided as standard)

The large-sized liquid crystal touch panel, which has been developed to ensure ease of operation, dramatically increases efficiency in edit work.

The IP-420 touch panel offers market-proven ease of operation. It is provided with a wide screen and programmable functions. Data can be input/edited while visually checking the needle movement. The color LCD unit displays sewing data such as stitch shape, needle thread tension, enlargement/reduction ratio, sewing speed and the number of stitches at a glance.

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.



## AMS-221EN TS3020

### Needle numbers and corresponding gauges

| Needle    | Needle clamp                        | SCREW               | Needle hole guide                     | Intermediate presser               | Inner hook presser                  | Shuttle hook                  |
|-----------|-------------------------------------|---------------------|---------------------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Number    | Part No.                            | Part No.            | Part No. Needle hole diameter         | Part No. Needle hole diameter      | Part No. Needle guide               | Part No.                      |
| #14 ~ #18 | 40140223 (Left)                     | SS6060 410TP x2pcs. | B242621000B (Standard equipment) φ2.0 | 40140277 (Standard equipment) φ1.8 | 14103352 (Standard equipment) 1.3mm | 40061991 (Standard equipment) |
| #18 ~ #20 | 40140224 (Right)                    |                     | B242621000D φ2.4<br>B242621000F φ3.0  |                                    |                                     |                               |
| #20 ~ #23 | 40150034 (Left)<br>40150035 (Right) | SM8030 412TP x2pcs. | B242621000F φ3.0                      | 40157760 φ2.2                      |                                     |                               |

## OPTION

| Description   | Part No.           | Feature  |
|---|--------------------|--|
| Programming software for computer-controlled sewing machines PM-1 Ver.3 | —                  | Thread color change command can be input through the operation panel of the main body of the sewing machine or through the PM-1 to enable creation of sewing data on two-color stitching. Other operability/workability follows that of the AMS223EN Series. |
| Needle cooler asm.  | 40035692           | It blows air on the needle to prevent thread breakage due to heat.   |
| Screw   | SL6051292TN x1pcs. |  |
| Washer  | WP0612516SD x1pcs. | So as to prevent any accidents that may be caused when the feeding frame does not match a program, a program which matches the feeding frame can be invoked by reading the bar-code.   |
| Bar-code reader   | 40089238           |  |
| Felt tension thread guard   |                    | In case of using ethylene oil  |
| Tension thread guard  | 40141047           |  |
| Felt  | B1131528000        |  |