JUKI®

AMS-210EN Series

Computer-controlled Cycle Machine with Input Function

JUKI ECO PRODUCTS

The sewing machine substantially reduces "power consumption" and promises "increased productivity" and "higher seam quality."

AMS-210EN 1510

AMS-210EN 1306

AMS-210EN 2210

Max. sewing speed 2,800sti/min

AMS-210EN-HS1510

AMS-210EN Series

Computer-controlled Cycle Machine with Input Function

AMS-210EN Series

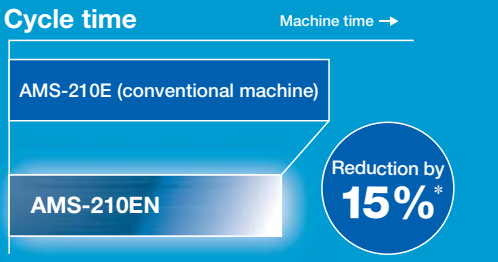
Computer-controlled Cycle Machine with Input Function

Productivity

The sewing speed has been increased to 2,800sti/min which is the highest sewing speed in the industrial sewing machine manufacturing industry. Various functions contribute to increased productivity!

UP

- The sewing machine has achieved the industry's highest sewing speed of 2,800sti/min.
  The maximum sewing speed is reached by the 2nd stitch from the beginning of sewing.
  Since the sewing machine maintains its highest sewing speed immediately before the end of sewing and instantaneously decreases its speed, cycle time can be substantially decreased.
- JUKI's unique stepping-motor controlled thread trimming mechanism is adopted to enable speedy and consistent thread trimming performance.
- The machine demonstrates enhanced responsiveness due to the adoption of a main-shaft direct-drive system.



*Sewing condition Pitch 4mm, 200 stitches
AMS-210EN : 2,800sti/min
AMS-210E : The maximum sewing speed when the stitching pitch is 4mm

*"sti/min" stands for "Stitches per Minute."

Productivity is increased!

Various applications

The machine can be used for free pattern stitching, parts sewing, reinforcement stitching, etc. Practical applications include attaching labels, emblems or name labels, attaching Velcro, decorative stitch to pockets and special bartacking.

Sewing emblems

Reinforcement stitching

The AMS-210EN Series comes in three different models which differ in sewing area.

1306

(X: 130mm × Y: 60mm)

AMS-210EN-$^{S}_{H}$**S1306** Motor-driven work clamp

AMS-210EN-$^{S}_{H}$**L1306** Pneumatic work clamp

This model flexibly responds to small items such as labels and emblems. Smooth sewing is promised since the small sewing area means ease of use.

1510

(X: 150mm × Y: 100mm)

NEW Motor-driven feeding frame type

AMS-210EN-$^{S}_{H}$**S1510** Motor-driven work clamp

AMS-210EN-$^{S}_{H}$**L1510** Pneumatic work clamp

The 1510 model is well received in the market due to its moderate-sized sewing area. Responding to market demand, the 1510 area model with a motor-driven feeding frame has been newly developed. This model can be used in a plant which is not provided with pneumatic equipment.

The sewing machine achieves increased productivity due to the highest sewing speed of 2,800sti/min in the industrial sewing machine manufacturing industry, instantaneous acceleration at the beginning of sewing and instantaneous deceleration at the end of sewing and increased speed of thread trimming, as well as achieving more accurate and higher seam quality due to the adoption of the newly-developed encoder-controlled stepping motor system for the X/Y feed mechanism.
With JUKI's unique active tension, which has been well received in the market, and the programmable intermediate presser height control, the sewing machine responds to various materials to provide higher seam quality. Smooth placement of the material on the sewing machine and a large color liquid crystal touch panel contribute to increased work efficiency.

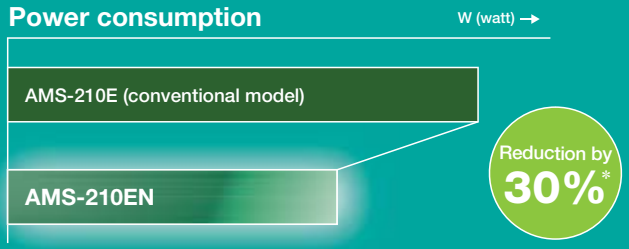
Energy-saving・Higher sewing quality

Adoption of the encoder control has achieved energy-saving and higher seam quality!

Power consumption is substantially decreased

The AMS-210EN is an economically-efficient model which has been designed to reduce power consumption. The sewing machine has adopted a direct-drive system by means of a compact AC servomotor that is excellent in energy transmission to drive the main shaft, and has adopted an encoder-control system which drives the stepping motor with a minimum of power in accordance with the material thickness and stitch length to control the X-Y drive mechanism. As a result, the power consumption of the AMS-210EN is reduced by 30% as compared with its conventional model (AMS-210E).

Power consumption



*Sewing condition Pitch 4mm, 200 stitches
standby time of 5 seconds, presser foot is lifted once
AMS-210EN : 2,800sti/min
AMS-210E : The maximum sewing speed when the stitching pitch is 4mm

Improvement of seam quality

The position of the feed can be checked during sewing by means of the encoder-controlled X-Y drive stepping motor. This remarkably improves accuracy of the feed. As a result, deformation of a sewing pattern which is likely to occur when sewing at a high speed or sewing a heavy-weight material is significantly reduced.

Shape tacking of bags and shoes

JUKI ECO PRODUCTS	The AMS-210EN is an environmentally-friendly product which meets JUKI ECO PRODUCTS certification criteria.
JUKI ECO PRODUCTS	●This sewing machine reduces power consumption by 30% as compared with the conventional models. ●The sewing machine satisfies the requirements stipulated in the "JUKI Group Green Procurement Guidelines*." And it certainly complies with the RoHS Directive*. ●As compared with the conventional model, the AMS-210EN reduces noise by 3dB and vibration by 1dB. For details of JUKI ECO PRODUCTS, refer to: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.

2210

(X: 220mm × Y: 100mm)

AMS-210EN-SH**L2210** Pneumatic work clamp

This model has a sewing area that is best-suited to the sewing of large parts, including the shape-tacking of jean pockets. With this model, you may recognize the higher productivity of the cycle machine.

AMS-210EN-HS1510

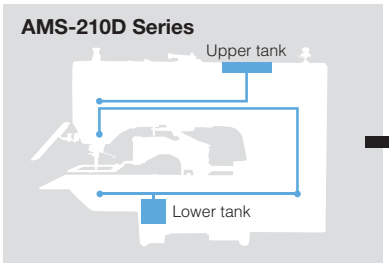
The sewing machine demonstrates not only improved seam quality and workability, but also flexible responsiveness to many different materials.

Double-stepped stroke feeding frame

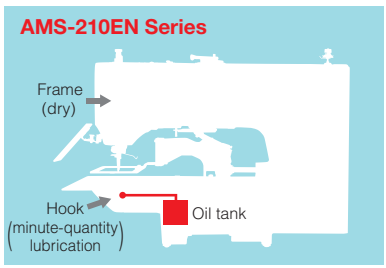
The feeding frame can be lowered in two steps. It is very convenient for finely positioning the material on the sewing machine. The stopping height of the feeding frame can be set as desired with ease.

Semi-dry head

The frame (needle bar unit and thread take-up unit) is lubricated with grease, and the hook is fed with a minute quantity of oil from the oil tank. JUKI's advanced dry technology, which is utilized in a number of our sewing machine models, protects your products from being stained with oil.



Lubrication/circulation diagram



Lubrication diagram

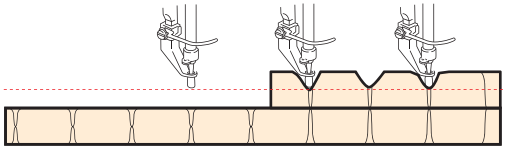
Active tension

Market-proven active tension has been introduced to the needle thread tension controller. With the active tension, pinpoint changes in the needle thread tension during sewing are enabled. The needle thread tension, therefore, can be set in conjunction with the material thickness and can be corrected according to the direction of sewing on a stitch-by-stitch basis through the operation panel. Since the needle thread tension is reproducible, supporting a broader range of sewing conditions, the time required for setup changing upon process changeover can be reduced.

Programmable intermediate presser

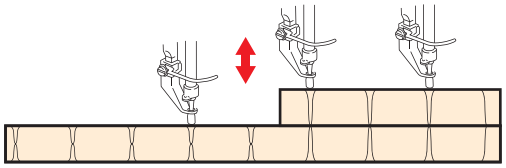
To support the sewing of multi-layered parts of materials, the lower dead point height of the intermediate presser can be changed steplessly during sewing (standard: 0~3.5mm; maximum: 0~7.0mm). The intermediate presser will now be able to clamp the material without fail, thereby preventing troubles in sewing, such as stitch skipping and thread breakage. Furthermore, flaws on the sewing product are prevented by maintaining the intermediate height as desired according to the material thickness. (The intermediate presser stoke is adjustable between 0 and 10mm.)

Conventional intermediate presser (AMS-210D Series)



The height of the intermediate presser is constant.

New programmable intermediate presser



The intermediate presser goes up and comes down according to the material thickness.

Slide-type thread take-up lever

AMS-210EN-HL1306/7300

The machine with a slide-type thread take-up lever is designed for improved stitching with heavy threads tension. JUKI's unique active tension mechanism which has been re-designed specifically for heavy-weight materials, as well as the slide-type thread take-up lever which is suited for sewing heavy-weight materials, increase the maximum tension by **50%** more compared to that of the standard models of the JUKI AMS Series machines. The new model improves seam quality (thread tension) for sewing seat belts and general heavy-weight materials such as container belts and bags.

Example application: Reinforcing the stitching of seatbelts

*The feeding frame is a special order item.

Model name	AMS-210EN-HL1306 / 7300
Sewing area	X: 130mm × Y: 60mm
Feeding frame type	Pneumatic feeding frame (lifting amount: 30mm)
Needle	DP×17 #25 (max. #26)
Thread	#2～#8 (nylon, Tetron)
Thread trimming	Stepping motor drive
Dimensions / Weight	In conformance with the standard model

Max. sewing speed	2,000sti/min* (when stitch length is 4.5mm or less)
Thread take-up	Slide-type thread take-up lever (dry frame)
Needle thread tension	Active tension for heavy-weight materials (tension increased by 50% more compared to that of the standard model)
Hook	Double-capacity shuttle hook
Wiper	Side wiping type

*"sti/min" stands for "Stitches per Minute."

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

IP-420

Operation panel provided with programmable functions

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 IP-420 is provided as standard with 14 different display languages.

◎**Key-lock customization function**
The key-lock state can be set as desired. It is therefore possible to hide items which should not be handled by the operators.
◎**Simplified operation mode**
Simplification of set items and screen transition of the IP-420 increases ease of use and helps reduce operator fatigue.

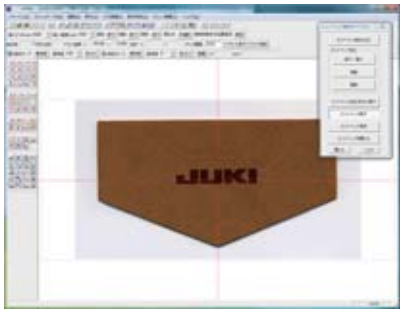
The memory storage capability of the main body of the sewing machine has been dramatically enhanced. Now the USB-ready main body of the sewing machine uses many different kinds of media.

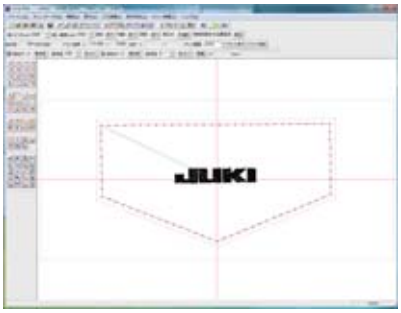
Sewing data created with the IP-420 can be stored in the memory of the main body of the sewing machine. The memory storage capacity is 500,000 stitches and 999 patterns (max. 50,000 stitches per pattern) at the maximum. In addition to the CompactFlash 33 card, the main body of the sewing machine is provided as standard with a USB connector. Now, data can be input/output to/from various kinds of media (FD (floppy disks), SM (SmartMedia), CF (CompactFlash), SD (Secure Digital Card) etc.) by means of a USB thumb device and a card reader. The maximum number of stitches that can be stored in the memory for each medium is approximately 50,000,000.

USB card reader

Programming software for computer-controlled sewing machines「PM-1」Ver.3 Windows Vista Compatible

On the PM-1 programming software, a sewing data shape can be checked more precisely as compared with the IP-420.
With the PM-1 programming software, frequent trial stitching can be directly done in repetition when editing complicated and minute data, thereby allowing the operator to create a sewing pattern design as desired free from stress during editing work.





■Device / Parts

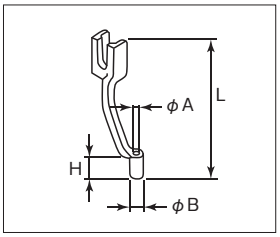
Part No.	Description	Feature
40092951*	Pneumatic inverted clamp device	The model is best-suited to circular sewing, for attaching small patches such as labels and emblems. ★For the S type (motor-driven work clamp), the AMS-210EN pneumatic set is required.
40092717	Needle cooler asm.	It blows air on the needle to prevent thread breakage due to heat. ★For the S type (motor-driven work clamp), the AMS-210EN pneumatic set is required.
40089848	Air unit asm.	The unit is required when the S type (motor-driven work clamp) uses FU-07 (pneumatic inverted clamp device) and needle cooler.
40035867	Side wiper asm.	A side wiping type is also available depending on the sewing products or sewing conditions.
40089692	One-touch utility clamp *Exclusive to the monolithic feeding frame	The feeding frame and the feed plate can be quickly changed without any tools.
40089695	One-touch utility clamp *Exclusive to the separately-driven feeding frame	
B2953210DA0*	Cassette holder asm.	The next material to be sewn can be placed between the top and bottom plates of the cassette holder while the machine is still engaged in the sewing of the currently set material.
B2594210DA0*	Cassette holder fixing base asm.	
40042352	Mechanical valve unit	It is possible to make up and down movements same as manual pedal. ★Not available to S type machine head.
40089238	Bar-code reader	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.

*Exclusive part for sewing area code 1306(X:1306mm-Y:60mm) *Parts for any area other than the above are available on special order.

■Needle / Needle hole guide / Intermediate presser corresponding table

Application	Needle	Needle hole guide		Intermediate presser	
	Number	Part No.	Needle hole diameter	Part No.	Dimensions (ϕA×ϕB×H×L)
Knit and knitting fabric (option)	#09～#11	B242621000C	ϕ1.6	B1601210D0E (option)	ϕ1.6×ϕ2.6×5.7×37.0
Light- to medium-weight (S type)	#11～#14 *1	B242621000A	ϕ1.6	40023632 (standard)	ϕ2.2×ϕ3.6×5.7×38.5
Medium- to heavy-weight (H type)	#14～#18 *2	B242621000B	ϕ2.0	B1601210D0FA (option)	ϕ2.2×ϕ3.6×8.7×41.5
Heavy-weight (option)	#18～#25	B242621000D	ϕ2.4	B1601210D0BA (option)	ϕ2.7×ϕ4.1×5.7×38.5
Heavy-weight (slide-type thread take-up lever: standard)		B242621000F	ϕ3.0	14433601	
Extra heavy-weight (option)		B242621000G	ϕ3.0 (with counterbore)	B1601210D0CA	ϕ3.5×ϕ5.5×5.7×38.5
For the prevention of stitch skipping on heavy-weight materials (option)		B242621000H	ϕ3.0 (with eccentric)		

S type: Fitting thread numbers #80～#20
*1 The needle equipped as standard (DP×5 #14)
H type: Fitting thread numbers #50～#02
*2 The needle equipped as standard (DP×17 #18)



Intermediate presser

When you place orders

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

Machine head

Application	Code
Light- to medium-weight	S
Medium- to heavy-weight	H

Sewing area	Code
X: 130mm - Y: 60mm	1306
X: 150mm - Y: 100mm	1510
X: 220mm - Y: 100mm	2210

Subclass	Code
Standard	5000
Subclass	5001～

AMS210EN □ □ □ □ □ □ **SZ** □ □ □ □ □

Feeding frame type	Code
Motor-driven work clamp	S
Pneumatic work clamp*	L

★For the AMS-210EN/2210, only the pneumatic feeding frame (L) can be selected.
*For the machine head of the area code 1306, the separately-driven feeding frame is provided.

Pedal switch	Code
PK 2-pedal unit (PK78)	C
PK 3-pedal unit (PK47)	D

★Feeding frame type
"C" (PK78) should be selected for the machine head with the motor-driven feeding frame (S).
"D" (PK47) should be selected for the machine head with the pneumatic feeding frame (L).

Control box

MC587 □ **IP420F**

Power supply		Code
3-phase	200～240V	E
Single-phase	200～240V	K
	200～240V (for CE)	N
	200～240V (for China)	U

Table stand

JTAM □

Feeding frame type	Code
Motor-driven work clamp	1
Pneumatic work clamp	2

●To order, please contact your nearest JUKI distributor.

Specifications

Model name	AMS-210EN-SS1306	AMS-210EN-HS1306	AMS-210EN-SL1306	AMS-210EN-HL1306
Sewing area	X: 130mm × Y: 60mm			
Feeding frame type	Motor-driven feeding frame (lifting amount: 25mm)		Pneumatic feeding frame (lifting amount: 30mm)	
Application	Light- to medium-weight	Medium- to heavy-weight	Light- to medium-weight	Medium- to heavy-weight
Needle	DP×5 (#14)	DP×17 (#18)	DP×5 (#14)	DP×17 (#18)
Compressed air / Air consumption	—		0.35～0.4 (max. 0.55) MPa / 1.8dm³/min (ANR)	
Dimensions / Weight	1,200mm(W) × 710mm(D) × 1,200mm(H) (thread stand is not included) / Machine head: 69kg, Control box: 16.5kg			

Model name	AMS-210EN-SS1510	AMS-210EN-HS1510	AMS-210EN-SL1510	AMS-210EN-HL1510
Sewing area	X: 150mm × Y: 100mm			
Feeding frame type	Motor-driven feeding frame (lifting amount: 25mm)		Pneumatic feeding frame (lifting amount: 30mm)	
Application	Light- to medium-weight	Medium- to heavy-weight	Light- to medium-weight	Medium- to heavy-weight
Needle	DP×5 (#14)	DP×17 (#18)	DP×5 (#14)	DP×17 (#18)
Compressed air / Air consumption	—		0.35～0.4 (max. 0.55) MPa / 1.8dm³/min (ANR)	
Dimensions / Weight	1,200mm(W) × 770mm(D) × 1,200mm(H) (thread stand is not included) / Machine head: 73kg, Control box: 16.5kg			

Model name	AMS-210EN-SL2210	AMS-210EN-HL2210
Sewing area	X: 220mm × Y: 100mm	
Feeding frame type	Pneumatic feeding frame (lifting amount: 30mm)	
Application	Light- to medium-weight	Medium- to heavy-weight
Needle	DP×5 (#14)	DP×17 (#18)
Compressed air / Air consumption	0.35～0.4 (max. 0.55) MPa / 1.8dm³/min (ANR)	
Dimensions / Weight	1,200mm(W) × 770mm(D) × 1,200mm(H) (thread stand is not included) / Machine head: 77kg, Control box: 16.5kg	

Specification common to all models

Max. sewing speed	2,800sti/min (when stitch length is 4mm or less)*
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. 0～7mm)
Needle thread tension	Active tension (electronic thread tension control mechanism)
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), JUKI New Defrix Oil No.2 (equivalent to ISO VG32)
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

*The machine with a slide-type thread take-up lever is excluded. Please refer to page 4.
*"sti/min" stands for "Stitches per Minute."

MS JAB CM001
JSA EMS ISO14001:2004 REG.NO.JSAE389
UKAS ENVIRONMENTAL MANAGEMENT 089

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

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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.

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