

Ultra high speed overlock sewing machine

Ultra high speed safety stitch sewing machine

High speed adjustable top and bottom feed overlock sewing machine

High speed adjustable top and bottom feed safety stitch sewing machine

## V series

High speed overlock sewing machine

High speed safety stitch sewing machine

## N series

Creates attractive seams that match the material

Stable sewing for a wide range of sewing applications

Maintenance and adjustments can be carried out quickly and easily



FB-V61A

***Attractive, stable sewing finishes that ideally suit a wide range of materials***

### Even better sewing quality

#### **Creates attractive and accurate seams**

This model produces a stable seam from the sewing start to the sewing end, with optimum thread feeding for a wide variety of different materials and threads.

#### **Clean sewing finishes**

The needle bar mechanism, the upper looper mechanism and the feed mechanism are all fully-closed. This eliminates the problem of oil leaks, and thus protects the material being sewn against staining from oil. It also prevents dust and other foreign articles from getting into the mechanisms.

#### **Does not damage the material**

The light presser foot pressure and improvements to the feed path mean that the materials is fed gently, so that no feed marks or damage are left on the material.



## Suitable for a wide range of materials and applications

### Wide range of applications

The four different upper looper paths provide a high degree of responsiveness to different material types. You can be assured of always obtaining the ideal level of sewing stability for all materials from extra light materials to extra heavy materials.

### Suitable for heavy materials

A maximum overlocking width is 7 mm. An ultra high lift-type presser foot with a maximum lift of 7 mm has also been adopted in order to handle heavy materials such as denim and bulky knitted materials.



## Adjustments can be made easily

### Quick responsiveness to changes in specifications and gauges.

The position adjustment of the main feed arm and differential feed arm, and the adjustment of the double chain stitch looper are possible from the rear, enabling easy maintenance and responses to specification changes.



### Easy adjustment of upper and lower feed dog timing (V72A/V82A/V92A)

The height of the upper feed dog can easily be adjusted from the rear simply without loosening the installation screw.



### Flexible response to different cloth thickness (V72A/V82A/V92A)

The amount of up and down movement of the upper feed dog can be adjusted at one touch using the external lever. The optimum amount of feed for the cloth thickness can be obtained.



Adjusting upper feed vertical amount



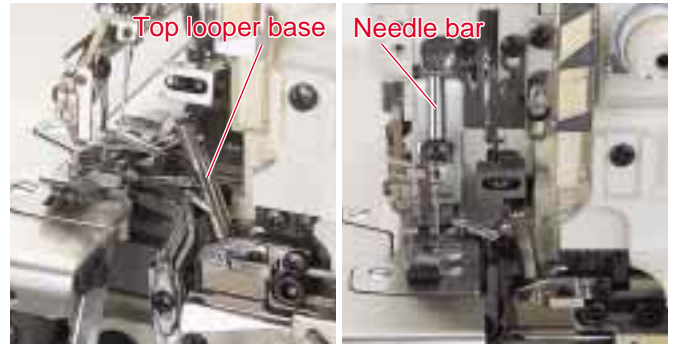
Adjusting upper feed amount

## Smooth, light sewing with low vibration

The components are lighter in weight and have been adjusted for balance in order to reduce the required torque, so that operation is smooth right from the sewing start. In addition, all components from the drive shaft through to the needle mechanism have been optimized for balance to reduce vibration even further during sewing.

# Excellent durability

The top looper base (V,N) and the needle bar (V) have been given a special coating to improve durability. This special coating dramatically increases the durability of machine.



## Specifications <Single needle overlock sewing machine>

**FB-V41A**  
Ultra high speed single needle overlock sewing machine

**FB-N110**  
High speed single needle overlock sewing machine



Applications	Sewing materials	Stitch width (mm)	Sub class			No. of needles	No. of threads	Height of presser foot (mm)	Stitch length (mm)	Differential ratio	Max sewing speed (rpm)	Over-looper locus	Needle size	Special use	
Plain seaming	Light - medium	3 4 5	3020	0	3 <sup>*1</sup> 4 <sup>*1</sup> 5	S3F	1	3	5	0.9-3.8	0.7-2.0	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #11	
	Bulky knit	5	3060	0	5	H8V	1	3	6	0.4-2.4	1.1-3.8	6,500 (N110)	High lift	DCx27 #14	
Blind-hemming	Light - medium	4 5	3120	0	4 5	S7F	1	3	5	0.9-3.8	0.7-2.0	7,000 (N110)	Standard lift	DCx27 #9	
Curling	Extra light- light	2	3310	0	2	S7F	1	3	5	0.9-3.8	0.7-2.0	7,000 (N110)	Standard lift	DCx27 #11	

\*1 3020-03 and 3020-04 are exclusive specifications to the FB-N110.

### Detailed specification

Needle gauge	Stitch width	Over-looper locus	Differential feed dog	Upper knife shape
0 Single needle	2 2mm	S Standard lift	2 2-row standard / with chain land	F Flat knife
2 2mm, 2.2mm	3 3mm	H High lift	3 3-row standard / with chain land	A Angle knife
X 2.5mm	4 4mm	E Extra high lift	7 2-row standard / without chain land	B Angle knife, wide
3 3mm	5 5mm	U Ultra high lift	8 3-row standard / without chain land	V Angle knife, wave shape
5 5mm	6 6mm			W Angle knife, wide, wave shape
A 3x2.2mm	7 7mm			
B 5x2.2mm				
C 5x3mm				

**FB-V41A-3020-03-S3F**

Stitch form	Applications	Sewing materials	Special use
3 Single needle over-edge chain stitch, 3-threads	0 Plain seaming	1 Extra light - light materials	0 Standard
5 Safety stitch, 5-threads	1 Blind-hemming	2 Light - medium materials	
6 Safety stitch, 6-threads	3 Curling	3 Medium - heavy materials	
W Twin needle over-edge chain stitch, standard stitch	4 Ruffling	4 Heavy - Extra heavy materials	
M Twin needle over-edge chain stitch, mock safety stitch	5 Taping	5 Extra heavy materials	
	8 Back-tacking	6 Bulky knit	
		7 Extra heavy bulky knit	
		G Extra heavy materials (special)	

## Specifications <Twin needle overlock sewing machine>

### FB-V51A

Ultra high speed twin needle overlock sewing machine



### FB-N210

High speed twin needle overlock sewing machine



Applications	Sewing materials	Needle gauge (mm)	Stitch width (mm)	Sub class			No. of needles	No. of threads	Height of presser foot (mm)	Stitch length (mm)	Differential ratio	Max sewing speed (rpm)	Over-looper locus	Needle size	Special use	
				M	S	F										
Plain seaming	Light - medium	2.2	5	M020	2	5	H3F	2	4	5.5	0.9-3.8	0.7-2.0	6,700 (N210)	High lift	DCx27 #11	Mock safety stitch
		3	6	M020	3	6	H3A	2	4	5.5	0.9-3.8	0.7-2.0	6,700 (N210)	High lift	DCx27 #11	Mock safety stitch
		2.2	5	W020	2	5	H3F	2	4	5.5	0.9-3.8	0.7-2.0	8,000 (V51A) 6,700 (N210)	High lift	DCx27 #11	
		3	5	W020	3	5	H3F	2	4	5.5	0.9-3.8	0.7-2.0	8,000 (V51A) 6,700 (N210)	High lift	DCx27 #11	
	Bulky knit	2.2	5	W060	2	5	H8V	2	4	5.5	0.4-2.4	1.1-3.8	6,500 (N210)	High lift	DCx27 #14	
	Extra heavy bulky knit	2.5	7	W070	X	7	E8V	2	4	7	0.4-2.4	1.1-3.8	6,000 (N210)	Extra high lift	DCx27 #14	
Taping	Light - medium	2.2	5	W520	2	5	H8F	2	4	5.5	0.9-3.8	0.7-2.0	6,700 (N210)	High lift	DCx27 #11	
	Bulky knit	2.2	5	W560	2	5	H8V	2	4	5.5	0.4-2.4	1.1-3.8	6,500 (N210)	High lift	DCx27 #14	
Back-tacking	Light - medium	2.2	5	W820	2	5	H3F	2	4	5.5	0.9-3.8	0.7-2.0	8,000 (V51A) 6,700 (N210)	High lift	DCx27 #11	

## Specifications <Safety stitch sewing machine>

### FB-V61A

Ultra high speed safety stitch sewing machine



### FB-N310

High speed safety stitch sewing machine



Applications	Sewing materials	Needle gauge (mm)	Stitch width (mm)	Sub class			No. of needles	No. of threads	Height of presser foot (mm)	Stitch length (mm)	Differential ratio	Max sewing speed (rpm)	Over-looper locus	Needle size	Special use
				M	S	F									
Plain seaming	Light - medium	3	3	5020	3	3 <sup>*2</sup>	S3F	2	5	5	0.9-3.8	0.7-2.0	Standard lift	DCx27 #14	
			4		4 <sup>*2</sup>										
	Medium - heavy	5	5	5030	5	5	S3F	2	5	5	0.9-3.8	0.7-2.0	Standard lift	DCx27 #16	
		5	6	5030	5	6	H3F	2	5	5	0.9-3.8	0.7-2.0	High lift	DCx27 #16	
		5 x 2.2	5	6030	B	5	H2F	3	6	6	0.9-3.8	0.7-2.0	High lift	DCx27 #16	
Extra heavy	5	5 6 7	5050	5	5 6 7 <sup>*3</sup>	E3W	2	5	3.5	1.2-5.0	0.7-1.4	6,500 (V61A) 6,000 (N310)	Extra high lift	DCx27 #18	Tractor presser

\*2 5020-33 and 5020-34 are exclusive specifications to the FB-N310.

\*3 5050-57 is the exclusive specification to the FB-V61A.

# Specifications <Adjustable top and bottom feed overlock sewing machine / safety stitch sewing machine>



## FA-V82A

High speed twin needle adjustable top and bottom feed overlock sewing machine (front feed)

Applications	Sewing materials	Needle gauge (mm)	Stitch width (mm)	Sub class			No. of needles	No. of threads	Height of presser foot (mm)	Stitch length (mm)	Differential ratio	Max sewing speed (rpm)	Upper feed amount (mm)	Upper feed vertical amount (mm)	Over-looper locus	Needle size	Special use	
				W020	2	5												H8F
Plain seaming	Light - medium	2.2	5	W020	2	5	H8F	2	4	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #11	



## FA-V92A

High speed adjustable top and bottom feed safety stitch sewing machine (front feed)

Applications	Sewing materials	Needle gauge (mm)	Stitch width (mm)	Sub class			No. of needles	No. of threads	Height of presser foot (mm)	Stitch length (mm)	Differential ratio	Max sewing speed (rpm)	Upper feed amount (mm)	Upper feed vertical amount (mm)	Over-looper locus	Needle size	Special use	
				5020	3	5												H3F
Plain seaming	Light - medium	3	5	5020	3	5	H3F	2	5	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #14	
		3x2.2	5	6020	A	5	H3F	3	6	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #14	
	Medium - heavy	5	5	5030	5	5	H3F	2	5	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #16	
		5x2.2	5	6030	B	5	H3F	2	6	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #16	
	Extra heavy	5	5 6 7	5050	5	5 6 7	E3V	2	5	3.5	0.9-3.8	0.7-2.0	5,500	6	5	Extra high lift	DCx27 #21	Tractor presser

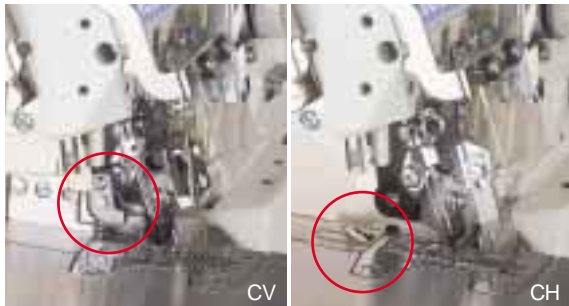
## Main differences between V series and N series

	V series	N series
Max. sewing speed	Ultra high speed	High speed
Needle cooler	Standard parts	Optional parts
Needle thread cooler	Standard parts	-
Cooling fan	Standard parts	-
Lubrication method	Forced lubrication method (including oil filter and drive shaft wick lubricating oil)	Forced lubrication method
Differential ratio adjustment method	Simple fine adjustments using a micro adjustment screw	Adjustment screw

## Options

### Chain cutter CV, CH

Cuts the thread at the same time as the sewing end is reached, providing increased work efficiency. The cutting methods include vertical and horizontal types, so that you can select the type that suits your needs.



### Tape cutter TC

Chain-off and tape are cut by means of a knee switch or a manual switch. This device has a cutter with excellent durability and keen cutting edge which improves working efficiency at the sewing end.



### Pneumatic auto foot lifter PL

With a light step, the presser foot lift automatically raised, resulting in a high level of work efficiency.



\*Refer to an attached table for the optional parts and the correspondence of the model.

### Needle cooler (Standard parts for V series)

The needle cooler cools the needle using silicon oil in order to prevent thread breakages due to heat.

This is particularly useful when sewing using synthetic threads.

## Optional parts and correspondence of machine

Optional parts		Machine model	V41A N110	V51A N210	V61A N310	V72A	V82A	V92A
Vertical chain cutter	Pneumatic, back suction	CV1	○	○	—	—	—	—
	Pneumatic, front suction	CV3	○	○	—	○	○	—
	Chain cutter only, back suction	CV7	○	○	—	—	—	—
	Chain cutter only, front suction	CV9	○	○	—	○	○	—
Horizontal chain cutter	Pneumatic	CH1	○	○	○	○	○	○
	Chain cutter only	CH3	○	○	○	○	○	○
Tape cutter	Knee switch, pneumatic	TC1	○	○	○	○	○	○
Pneumatic auto foot lifter		PL1	○	○	○	○	○	○

\*Product specifications are subject to change for improvement without notice. \*Photographs are for illustration purposes. They may not represent actual operating conditions and may display optional parts.

Please read instruction manual before using the machine for safety operation.

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