

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

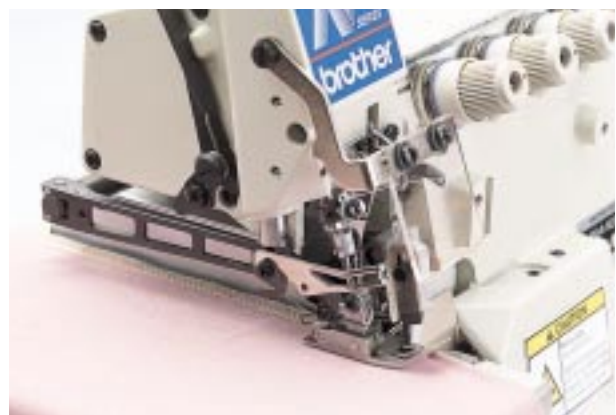
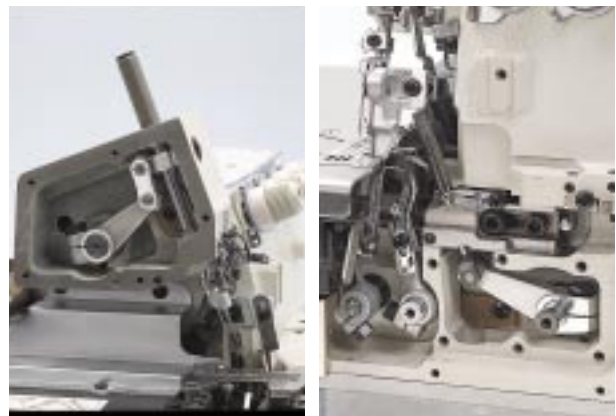
This model produces a stable seam from the sewing start to the sewing end, with optimum thread feeding for a wide variety of different materials and threads.

### 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 (V71A/V72A/V81A/V82A/V91A/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 (V71A/V72A/V81A/V82A/V91A/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



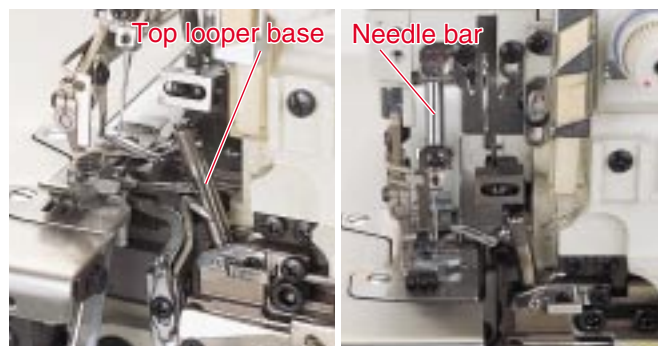
Adjusting upper feed amount

## 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.



## Options

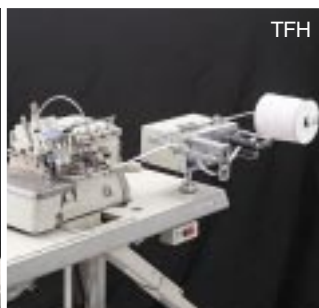
### Automatic tape cutter ATC

This cuts chain-off and tape to set lengths. A speed detection type of needle control using a photo sensor enables response to changes in speed and accurate positioning of cuts. A model with an pneumatic-type collector which removes cut chain-off and tape is also available.



### Automatic tape feeder TFV, TFH

Feeds only the amount of tape that is necessary. As no excess tension is applied to the tape, uniform tape sewing with no tape slippage is made possible. There is a vertical type which is optimum for attaching shoulder tape and a horizontal type which is optimum for attaching piping tape.



### Semi-auto backtack device SBL

A new type of stitch tongue produces attractive sewing finishes with backtacking. An automatic solenoid-type presser lifter with lower power requirements and an automatic needle up stop function both give an added boost to productivity. The combination of a compact material edge sensor panel and the MD-600 AC servo motor means that a special control box is no longer needed.



### 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.



### 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.



### Pneumatic auto foot lifter PL

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



### Folded edge controlling and hemming BH

#### 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.

### Sandwich ruffling device GA2

### Pneumatic cleaner set CL1

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

# 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	3020	0	3	S3F	1	3	5	0.9-3.8	0.7-2.0	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #11
		4		4										
		5		5										
		6	3020	0	6	H3F	1	3	5	0.9-3.8	0.7-2.0	8,000 (V41A) 6,700 (N110)	High lift	DCx27 #11
		7		7										
	3	3021	0	3	S8F	1	3	5	0.9-3.8	0.7-2.0	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #11	
	4		4											
	5	3021	0	6	H8F	1	3	5	0.9-3.8	0.7-2.0	8,000 (V41A) 6,700 (N110)	High lift	DCx27 #11	
	6		6											
	3	3022	0	3	S8F	1	3	5	0.9-3.8	0.7-2.0	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #11	
4	4													
5	5													
Bulky knit	3060	0	5	H8V	1	3	6	0.4-2.4	1.1-3.8	8,000 (V41A) 6,500 (N110)	High lift	DCx27 #14		
		6	6											
		7	7											
Blind-hemming	Light - medium	3	2120	0	3	S7F	1	2	5	0.9-3.8	0.7-2.0	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #9
		4		4										
Serging	Light - medium	4	2220	0	4	S2F	1	2	5	1.4-5.0	0.7-1.3	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #14
		5		5										
Curling	Extra light - light	4	3220	0	4	S2F	1	3	5	1.4-5.0	0.7-1.3	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #14
		5		5										
Ruffling	Light - medium	2	3310	0	2	S7F	1	3	5	0.9-3.8	0.7-2.0	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #11
		3		3										
Ruffling with piping	Light - medium	4	3420	0	4	S3F	1	3	5	0.8-3.2	0.8-2.8	7,500 (V41A) 6,500 (N110)	Standard lift	DCx27 #11
		5		5										
Taping	Light - medium	3	3520	0	3	S7F	1	3	5	0.9-3.8	0.7-2.0	8,500 (V41A) 7,000 (N110)	Standard lift	DCx27 #11
		4		4										
Back-tacking	Light - medium	5	3560	0	5	H8V	1	3	6	0.4-2.4	1.1-3.8	8,000 (V41A) 6,500 (N110)	High lift	DCx27 #14
		6		6										
		7												
		7												
		7												

## Detailed specification

<b>Needle gauge</b>	<b>Stitch width</b>	<b>Over-looper locus</b>	<b>Differential feed dog</b>	<b>Upper knife shape</b>
0 Single needle	2 2mm	S Standard lift	1 1-row standard / with chain land	F Flat knife
2 2mm, 2.2mm	3 3mm	H High lift	2 2-row standard / with chain land	A Angle knife
X 2.5mm	4 4mm	E Extra high lift	3 3-row standard / with chain land	B Angle knife, wide
3 3mm	5 5mm	U Ultra high lift	4 4-row standard / with chain land	V Angle knife, wave shape
5 5mm	6 6mm		6 1-row standard / without chain land	W Angle knife, wide, wave shape
A 3x2.2mm	7 7mm		7 2-row standard / without chain land	
B 5x2.2mm			8 3-row standard / without chain land	
C 5x3mm			9 4-row standard / without chain land	

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

<b>Stitch form</b>	<b>Applications</b>	<b>Sewing materials</b>	<b>Special use</b>
2 Single needle over-edge chain stitch, 2-threads	0 Plain seaming	1 Extra light - light materials	0 Standard
3 Single needle over-edge chain stitch, 3-threads	1 Blind-hemming	2 Light - medium materials	1 Small type
4 Safety stitch, 4-threads	2 Serging	3 Medium - heavy materials	2 Soft chain
5 Safety stitch, 5-threads	3 Curing	4 Heavy - Extra heavy materials	3 Special differential ratio
6 Safety stitch, 6-threads	4 Ruffling	5 Extra heavy materials	G Sandwich ruffling
W Twin needle over-edge chain stitch, standard stitch	5 Taping	6 Bulky knit	S Semi auto backtack
M Twin needle over-edge chain stitch, mock safety stitch,	6 Ruffling with piping	7 Extra heavy bulky knit	
	7 Binding with taping	G Extra heavy materials (special)	
	8 Back-tacking	S New synthetic fiber	
	C Attaching curtain weight		

## 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	
				W	S	H										
Plain seaming	New synthetic fiber	2.2	5	W0S0	2	5	H3F	2	4	5.5	1.2-3.8	0.5-1.5	7,500 (V51A)	High lift	DCx27 #9 PSU	
	Light - medium	2.2	4	M020	2	4	H3F	2	4	5.5	0.9-3.8	0.7-2.0	7,500 (V51A) 6,700 (N210)	High lift	DCx27 #11	Mock safety stitch
			5			6										
		3	6	M020	3	6	H3F	2	4	5.5	0.9-3.8	0.7-2.0	7,500 (V51A) 6,700 (N210)	High lift	DCx27 #11	Mock safety stitch
			7			7										
		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	
			6			6										
	3	7	W020	3	7	H3F	2	4	5.5	0.9-3.8	0.7-2.0	8,000 (V51A) 6,700 (N210)	High lift	DCx27 #11		
		7			7											
	2.2	4	W021	2	4	H8F	2	4	5.5	0.9-3.8	0.7-2.0	8,000 (V51A) 6,700 (N210)	High lift	DCx27 #11	Small type	
5		6														
Heavy - extra heavy	3	6	W040	3	6	E3W	2	4	6	1.2-5.0	0.7-1.4	6,500 (V51A) 6,000 (N210)	Extra high lift	DCx27 #18		
																7
Extra heavy	3	6	W050	3	6	E3W	2	4	6	1.2-5.0	0.7-1.4	6,500 (V51A) 6,000 (N210)	Extra high lift	DCx27 #18	Tractor presser	
Bulky knit	2.2	5	W060	2	5	H8V	2	4	5.5	0.4-2.4	1.1-3.8	8,000 (V51A) 6,500 (N210)	High lift	DCx27 #14		
Extra heavy bulky knit	2.5	6	W070	X	6	E8V	2	4	7	0.4-2.4	1.1-3.8	6,500 (V51A) 6,000 (N210)	Extra high lift	DCx27 #14		
Ruffling	Light - medium	2.2	5	W420	2	5	H3F	2	4	5.5	0.8-3.2	0.8-2.8	7,500 (V51A) 6,500 (N210)	High lift	DCx27 #11	
Ruffling with piping	Light - medium	2.2	5	W620	2	5	H3F	2	4	5	0.8-3.2	0.8-2.8	7,500 (V51A) 6,500 (N210)	High lift	DCx27 #11	
Taping	Light - medium	2.2	5	M520	2	5	H8F	2	4	5.5	0.9-3.8	0.7-2.0	7,500 (V51A) 6,700 (N210)	High lift	DCx27 #11	Mock safety stitch
			6			7										
	2.2	6	W520	2	6	H8F	2	4	5.5	0.9-3.8	0.7-2.0	8,000 (V51A) 6,700 (N210)	High lift	DCx27 #11		
7		7														
Bulky knit	2.2	5	W560	2	5	H8V	2	4	5.5	0.4-2.4	1.1-3.8	8,000 (V51A) 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	
			6			6										
	2.2	5	W82S	2	5	H2F	2	4	5.5	0.9-3.8	0.7-2.0	8,000 (V51A) 6,700 (N210)	High lift	DCx27 #11	Semi auto backtack	
6		6														
Extra heavy bulky knit	2.5	6	W870	X	6	E8V	2	4	7	0.4-2.4	1.1-3.8	6,500 (V51A) 6,000 (N210)	Extra high lift	DCx27 #14		

### 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

# 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	
Plain seaming	New synthetic fiber	3	5	50S0	3	5	S3F	2	5	5	1.2-3.8	0.5-1.5	7,500 (V61A)	Standard lift	DCx27#9 PSU	
	Extra light - light	2	2 3 4 5	4010	2	2 3 4 5	S2F	2	4	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #11	
		2	2 3 4 5	5010	2	2 3 4 5	S2F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #11	
		2	2 3 4 5	5011	2	2 3 4 5	S2F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #11	Small type
		3	3 4 5	4020	3	3 4 5	S3F	2	4	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	
	Light - medium	3	6 7	4020	3	6 7	H3F	2	4	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	High lift	DCx27 #14	
		3	3 4 5	5020	3	3 4 5	S3F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	
		3	6 7	5020	3	6 7	H3F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	High lift	DCx27 #14	
		3	3 4 5	5021	3	3 4 5	S2F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	Small type
	Medium - heavy	5	4 5	4030	5	4 5	S3F	2	4	5	0.8-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #16	
		5	6 7	4030	5	6 7	H3F	2	4	5	0.8-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	High lift	DCx27 #16	
		5	4 5	5030	5	4 5	S3F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #16	
		5	6 7	5030	5	6 7	H3F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	High lift	DCx27 #16	
		5 x 2.2	5	6030	B	5	H2F	3	6	6	0.9-3.8	0.7-2.0	7,000 (V61A) 6,500 (N310)	High lift	DCx27 #16	
	Extra heavy	3	3 5	4050	3	3 5	E2W	2	4	3.5	1.2-5.0	0.7-1.4	6,500 (V61A) 6,000 (N310)	Extra high lift	DCx27 #18	Tractor presser
		5	5 6 7	4050	5	5 6 7	E3W	2	4	3.5	1.2-5.0	0.7-1.4	6,500 (V61A) 6,000 (N310)	Extra high lift	DCx27 #18	Tractor presser
		3	3 5	5050	3	3 5	E2W	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
		5	5 6 7	5050	5	5 6 7	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
		5	5 6 7	5051	5	5 6 7	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 for vertical pocket
	Ruffling	Light - medium	2	4 5	5420	2	4 5	S3F	2	5	5	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	Standard lift	DCx27 #14
3			4 5	5420	3	4 5	S3F	2	5	5	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	
Medium - heavy		5	5	5430	5	5	S3F	2	5	5	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	
		5	6	5430	5	6	H3F	2	5	5	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	High lift	DCx27 #14	
		5 x 2.2	5	6430	B	5	H3A	3	6	6	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	High lift	DCx27 #14	
Ruffling with piping	Light - medium	3	5	5620	3	5	S3F	2	5	5	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	
	Medium - heavy	5	5	5630	5	5	S3F	2	5	5	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	
		5	6	5630	5	6	H3F	2	5	5	0.8-3.2	0.8-2.8	7,000 (V61A) 6,500 (N310)	High lift	DCx27 #14	
Taping	Light - medium	3	4 5	5520	3	4 5	S3F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	
	Medium - heavy	5	4 5	5530	5	4 5	S3F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #16	
		5	6	5530	5	6	H3F	2	5	5	0.9-3.8	0.7-2.0	7,500 (V61A) 6,500 (N310)	High lift	DCx27 #16	
Back-tacking	Light - medium	3	4 5	5720	3	4 5	S2F	2	5	5	0.9-3.8	0.7-2.0	6,500 (V61A) 6,500 (N310)	Standard lift	DCx27 #14	

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

## FA-V71A

**High speed single needle adjustable top and bottom feed overlock sewing machine (back feed)**

## FA-V72A

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



### FA-V71A

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)	Upper feed amount (mm)	Upper feed vertical amount (mm)	Over-looper locus	Needle size	Special use
			3020	0	3 4 5											
Plain seaming	Light - medium	3 4 5	3020	0	H8F	1	3	5.5	0.9-3.8	0.7-2.0	6,500	6	4	High lift	DCx27 #11	

### FA-V72A

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)	Upper feed amount (mm)	Upper feed vertical amount (mm)	Over-looper locus	Needle size	Special use
			3020	0	4 5 6 7											
Plain seaming	Light - medium	4 5 6	3020	0	H8F	1	3	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #11	
		3 4 5	3021	0	H8F	1	3	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #11	Small type
	Bulky knit	5 6 7	3060	0	E8V	1	3	6.5	0.4-2.4	1.1-3.8	5,000	8	5	Extra high lift	DCx27 #14	
Shirring	Light - medium	5	3420	0	E8F	1	3	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #11	
Shirring with piping	Light - medium	5	3620	0	E8F	1	3	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #11	

## FA-V81A

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

## FA-V82A

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



### FA-V81A

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	4 5 6 7											
Plain seaming	Light - medium	2.2	4 5 6 7	W020	2	H8F	2	4	5.5	0.9-3.8	0.7-2.0	6,500	6	4	High lift	DCx27 #11	

### FA-V82A

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	4 5 6 7											
Plain seaming	Light - medium	2.2	4 5 6 7	W020	2	H8F	2	4	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #11	
			5 6	W021	2	H8F	2	4	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #11	Small type
	Extra heavy	3	6 7	W050	3	E3V	2	4	6.5	0.9-3.8	0.7-2.0	5,500	6	5	Extra high lift	DCx27 #18	
	Bulky knit	2.2	5 6 7	W060	2	E4V	2	4	6.5	0.4-2.4	1.1-3.8	5,000	8	5	Extra high lift	DCx27 #11	
	Extra heavy bulky knit	2.5	5 6 7	W070	X	E4V	2	4	6.5	0.4-2.4	1.1-3.8	5,000	8	5	Extra high lift	DCx27 #14	
Shirring	Light - medium	2.2	5 6	W420	2	E8F	2	4	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #11	
Shirring with piping	Light - medium	2.2	5 6	W620	2	E8F	2	4	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #11	
Taping	Light - medium	2.2	5 6 7	W520	2	E8F	2	4	5.5	0.9-3.8	0.7-2.0	6,000	6	4	Extra high lift	DCx27 #11	

## FA-V91A

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

## FA-V92A

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



### FA-V91A

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	3 4 5 6 7											
Plain seaming	Light - medium	3	3 4 5 6 7	5020	3	H3F	2	5	5	0.9-3.8	0.7-2.0	6,500	6	4	High lift	DCx27 #14	
			3 4 5 6 7	5030	5	H3F	2	5	5	0.9-3.8	0.7-2.0	6,500	6	4	High lift	DCx27 #16	
	Extra heavy	5	5 6 7	5050	5	E3V	2	5	3.5	0.9-3.8	0.7-2.0	5,500	6	5	Extra high lift	DCx27 #18	Tractor Presser

# FA-V92A

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	
Plain seaming	Light - medium	3	3	5020	3	H3F	2	5	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #14		
			4		4													
			5		5													
	Medium - heavy	5	4	5030	3	H3F	2	5	5.5	0.9-3.8	0.7-2.0	6,000	6	4	High lift	DCx27 #14	Small type	
			5		5													
	Extra heavy	5	5	5050	5	E3V	2	5	3.5	0.9-3.8	0.7-2.0	5,500	6	5	Extra high lift	DCx27 #21	Tractor presser	
			6		6													
			7		7													
			5x3		5													
			5x3		5													
Extra heavy (special)	5	6	50G0	5	U3B	2	5	4	1.2-5.0	0.7-1.4	5,000	8	5	Ultra high lift	DCx27 #18	Tractor presser		
Shirring	Light - medium	3	4	5420	3	E3F	2	5	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #14		
			5		5													
	Medium heavy	5	5430	5	E3F	2	5	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #14	Sandwich ruffling		
Shirring with piping	Light - medium	3	4	5620	3	E3F	2	5	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #14		
			5		5													
	Medium - heavy	5	5	5630	5	E3F	2	5	5.5	0.9-3.8	0.7-2.0	5,000	8	4	Extra high lift	DCx27 #14		

## Optional parts and correspondence of machine

Optional parts		Machine model	V41A N110	V51A N210	V61A N310	V71A V72A	V81A V82A	V91A V92A
Automatic tape cutter	Stitch number control	ATC1	○	○	○	○	○	○
	Stitch number control, Pneumatic suction, Tension release	ATC3	○	○	○	○	○	○
	Stitch number control, Pneumatic suction	ATC5	○	○	○	○	○	○
Automatic tape feeder	Vertical	TFV	○	○	○	○	○	○
	Horizontal	TFH	○	○	○	○	○	○
Semi-auto backtack device	For single needle	SBL10	○	—	—	—	—	—
	For twin needle	SBL20	—	○	—	—	—	—
Vertical chain cutter	Pneumatic, back suction	CV1	○	○	—	—	—	—
	Pneumatic, front suction	CV3	○	○	—	○	○	—
	Vacuum type, back suction	CV4	○	○	—	—	—	—
	Vacuum type, front suction	CV6	○	○	—	○	○	—
	Chain cutter only, back suction	CV7	○	○	—	—	—	—
Horizontal chain cutter	Chain cutter only, front suction	CV9	○	○	—	○	○	—
	Pneumatic	CH1	○	○	○	○	○	○
	Vacuum type	CH2	○	○	○	○	○	○
Tape cutter	Chain cutter only	CH3	○	○	○	○	○	○
	Knee switch, pneumatic	TC1	○	○	○	○	○	○
	Knee switch, solenoid type	TC3	○	○	○	○	○	○
	Manual switch, solenoid type	TC5	○	○	○	○	○	○
	Pneumatic auto foot lifter	PL1	○	○	○	○	○	○
	Folded edge controlling and hemming	BH	○	—	—	—	—	—
	Sandwich ruffling device	GA2	—	—	—	—	—	○
	Pneumatic cleaner set	CL1	○	○	○	○	○	○

Blower motor for chain cutter vacuum type is optional.

Product specifications are subject to change for improvement without notice. Please read instruction manual before using the machine for safety operation.

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