



FACTORY AUTOMATION

GOOD

DESIGN

## INDUSTRIAL SEWING MACHINES PLK-J (General Catalog)

MITSUBISHI FLECTRIC

DATS

A

Next-generation Sewing

## **Everything to improve usability**

Stable and neat stitches

MITSUBISHI ELECTRIC

Beautiful design stitching

## Automotive

From quality control to quality assurance

Next-generation Sewing

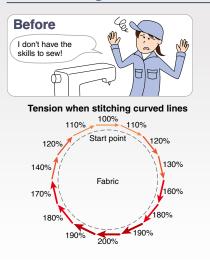


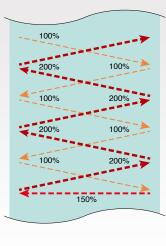
## Safety Belt

Strong penetrating force pierces even stiff fabrics

## Improve finished stitches!

Optimizes thread tightness in all stitching directions





#### **Digital tension**

Digital tension function

- The sewing machine selects the optimum tension according to the stitching pattern. They reduce variation in tightness according to the stitching direction and improve quality. **This function is ideal for difficult circle stitching and stitching in the hitch direction.**
- Digital reproduction of the aesthetic sense of skilled workers

The basic adjustments are the same as conventional machine, so there is no need to learn new operation methods. Conventional knob settings may be kept as they

are, while stitching using the digital function.

• When sewing safety belts, the fabric becomes harder as the stitching progresses. By gradually increasing the tension, stable stitches can be realized with each stitch.

#### Realizes stable thread interlocking from the first stitch



Stitches not interlocked







## Prevention of skipped stitches at startup (e-stitch)

beautiful stitching finish

beautiful

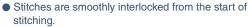
stitching

finish

beautiful

stitching

finish



"Stitch interlock faults" are resolved by minimizing the flapping of fabric at the start of stitching.

"Stitch entanglement," which occurs on the back of the fabric at the start of stitching, is minimized.

 Inevitable stay stitching can be minimized. Stay stitches can be minimized by using the presser foot to firmly press down on thin fabrics that are difficult to interlock.

This function is useful for stitching on materials that are difficult to stay stitch, while maintaining stitching quality.

Enhance decorative stitching with a beautiful finish that does not require stay stitches.

## Ensures neat corners by anyone





 Shorten the adjustment time for stitching corners, start of stitching and end of stitching. Times can be finely adjusted easily in the operation panel, so

Stitch compensation

(FF-stitch)

- anyone can perform intuitive adjustments. The settings can be easily and finely adjusted according to the corners and number of stitches for each sewing product. The needle drop position (back or forth) can be easily adjusted.
- Even if a problem occurs at the corner during high-speed stitching, it can be easily adjusted.
   Productivity is improved as there is no need to drop the speed to create a neat corner.
  - \* Supported by PLK-J2516-YU/J2516R-YU only

## Realizes beautiful stitches using diverse adjustment functions

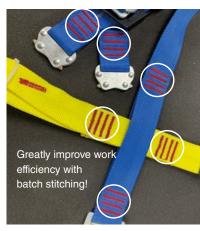
#### Independent presser foot



- Before The stitches are different depending on the fabric... Securely presses down on the fabric before the needle penetrates Securely presses down again after the needle lifts up
- A presser foot optimally presses down on all fabrics, from thin to thick.
   The presser foot, which directly affects the stitching state, allows free motion, so beautiful and stable stitches can be achieved.
   Stitching tension can be smoothly adjusted in the operational panel.
- The fabric pressing time and timing can be adjusted digitally.
   The fabric is pressed at an optimum timing to prevent the fabric from lifting up.
   This contributes to stable needle location and reduced stitch skipping.

#### Supports larger stitching areas





#### Extra-thick stitching of larger areas

stitching finish

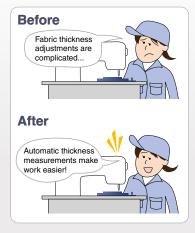
beautiful

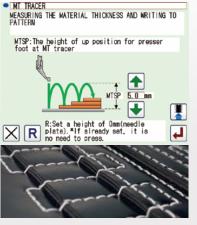
• With an increased stitching area, you can perform multiple steps for full harnesses and lashing belts in one stitching session.

Speed is been increased by 1.5-times compared to conventional extra-thick stitching. The increased stitching area and increased speed will greatly shorten cycle times.

\* Supported by PLK-J4040RH/J10050RH only

## Automatically adjusts presser foot height





#### Featuring an MT tracer

beautiful stitching finish

- The presser foot adjusts its height after automatically measuring the overall fabric thickness along the stitching pattern. Although it was necessary in the past for workers to manually adjust the presser foot height of each location where fabric thickness changes occurred, use of this function enables the time and effort necessary for such process to be drastically reduced.
- This function is useful for sewing materials with numerous locations of varying thickness.
  - \* This function does not guarantee that the optimal presser foot height for the fabric being sewn will be achieved. After measurements are performed, fine adjustments may be necessary in some cases.



## **Thoroughly prevent rejects**

## Automatically discovers setting errors

#### Thickness detection

Stitch alerts

Thoroughly prevent rejects

Thoroughly

prevent rejects

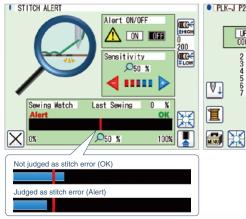


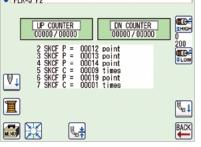
• The sewing machine checks the thickness of the fabric and detects setting errors before beginning sewing.

The presser foot moves along the stitching pattern and confirms the thickness, so valuable fabric is not wasted.

• Even materials 0.01mm thin can be detected. The sewing machine double-checks all conventional settings that are made manually.

## Accurately detects stitching errors





#### Stitch errors are discovered beforehand. The stitch errors (skipped stitches, thread breaks) that occur during stitching are detected by sensing the tension applied on the hook. This function stops the sewing machine so rejects can be found at an early stage.

\* Supported by PLK-J4040RH/J10050RH only







#### Stitch error detection

In addition to visual detection by the operator, stitch errors (skipped stitches, thread breaks) are accurately detected by the machine to prevent producing rejects.

The machine can also detect at which stitch the stitch error occurred. This information can be used to analyze the sections of fabric or pattern where stitch skipping tends to occur.

\* Supported by PLK-J2516-YU/J2516R-YU with options

Excludes PLK-J4040RH/J10050RH

## Simplify maintenance!

#### **Enables digital adjustment**



Hook position correction Hook position correction (-10.0 - +10.0) Last prost post +00.0 deg

HOOK POSITION ADJUSTMENT

## Digital adjustment of hook, presser foot, and thread trimmer (up/down separate drive)

- Simplify maintenance!
- Shorter adjustment time.
   Operation panel settings greatly reduce the "time spent on making fine adjustments with a tool".
- The machine adjustment section is quantified to simplify adjustments.

The quantified settings make it possible to reproduce machine adjustment sections that were previously not possible.

- The finely honed sense of skilled workers can be digitally reproduced as necessary. Sections that required the finely honed sense of a skilled worker can now be adjusted simply by setting values in the operation panel.
  - \* With the PLK-J2516-YU/J2516R-YU, only the presser foot can be digitally adjusted.



## Open/close window for bobbin exchange

Unlike conventional large models which required the operator to get under the sliding plate to replace the bobbin, the J Series models all have an open/close window on the sliding plate so that the bobbin can be easily exchanged. This greatly reduces the operator's work.

\* Excludes PLK-J2516-YU/J2516R-YU



**Glass epoxy sliding plate** The glass epoxy sliding plate is not contaminated as easily as the conventional stainless steel plate, and helps to prevent rust.



**Spray-type digital oiling** Oiling of the hook and upper shaft is digitally controlled so only a minimal amount of oil is needed. This function prevents oil leaks.

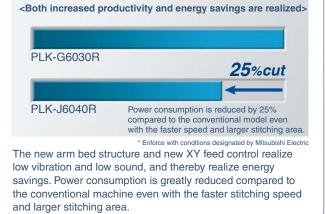
#### Ensures quality and energy savings



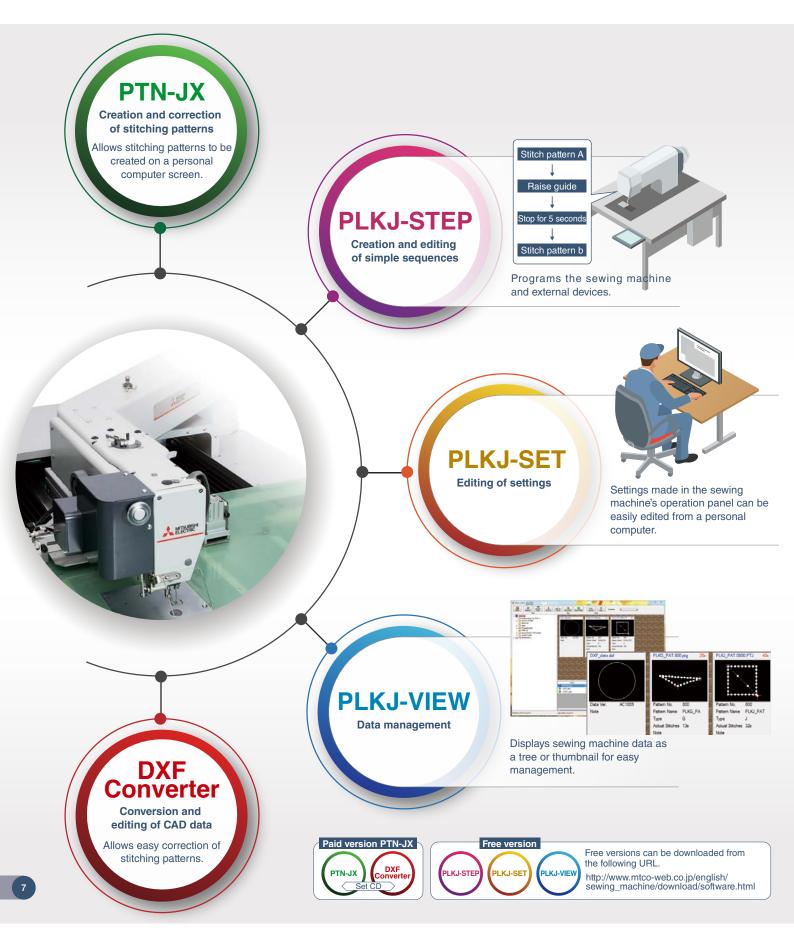
Stitching speed is maximized under various conditions even when the fabric thickness changes.

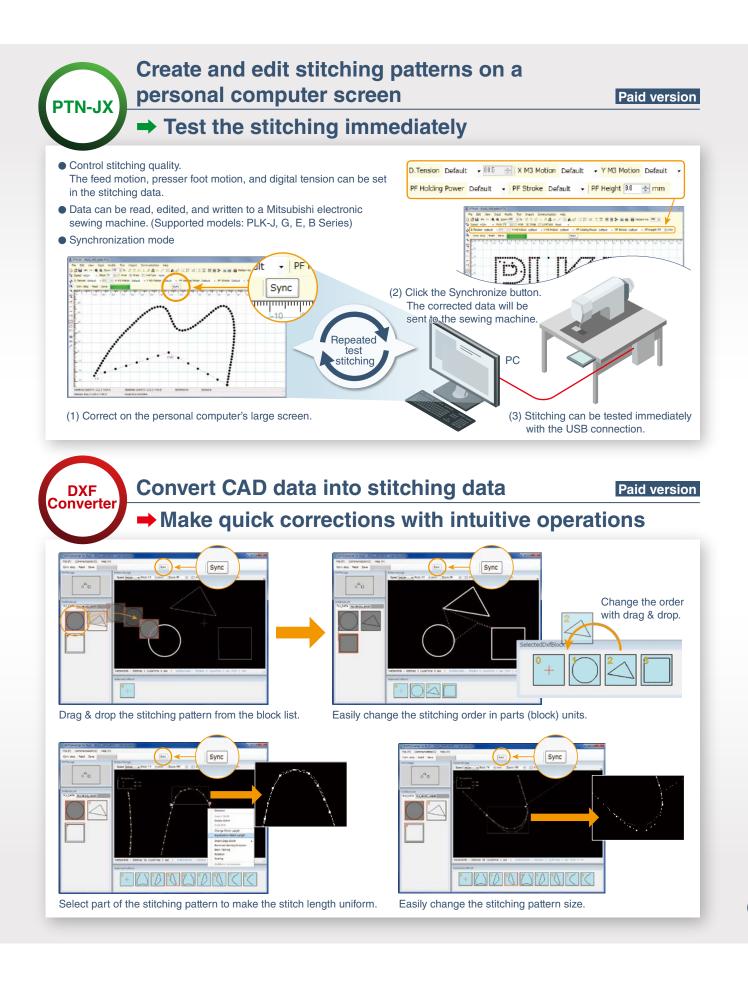
It is increased by up to 30% compared to the stitching speed of conventional sewing machines.

#### **Outstanding energy-saving effect**



## Software that enhances J Series usability





# Responding to various stitching scenes with the best specifications

PLK-74040/6040 💷

## PLK-72516-YU @2 PLK-72516R-YU @2



#### Sewing area 300 x 200mm: PLK-J2516-YU/2516R-YU

Item	PLK-J2516-YU	PLK-J2516R-YU
Stitching style	Single-needle lockstitch	
Hook	Double-size shuttle hook	Double-size rotary hook
Needle	DP×1	7 #18
Max. speed (Note 1)	Intermittent feed: 2,300rpm Continuous feed: 2,300rpm <sup>(Note 1)</sup>	
Feeding system	Intermittent or continuo	ous (switchover method)
Stitch length	0.1 to 20.0mm (min	. resolution 0.1mm)
Max. stitches		hes/pattern
Max. patterns	9,000	(Note 2)
Memory medium	USB flast	n memory
Upper shaft motor	Mitsubishi Electric 75	0W direct servo motor
Lower shaft motor		-
Work holder	Air cylinder drive	
Presser foot drive	Direct drive by stepping motor	
Presser foot lift stroke	18.0mm (max. 22.0mm) variable in 0.1mm step	18.0mm (max. 24.0mm) variable in 0.1mm step
Presser foot stroke	Digital adjustment stroke: 0.0 to 10.0mm	
	Manual/digital switchover method	
Upper thread tensioner	Input data save function provided	
opper thread tensioner	Stitching direction-compatible automatic adjustment function provided	
Oil lubrication	Inside of sewing machine head only Spray type: Adjustable spray time method	
Operation panel	6.5-inch color LCD tou	ch panel with USB port
External device	Terminal I/O 16-point input, 16-point output	
Interface	Ethernet <sup>(Note 3)</sup> (CC-Link IE Field Basic compatible), USB communication	
Barcode reader	USB barcode reader (HID) supported	
Thread break detection, skipped stitch detection (Note 4)	Option quailable (MD, IOF, AD)	
Stitch alert (Note 4)	-	
Programmable controller	Dual original step sequence function	
Outline dimensions	1,200 x 1,144 x 1,230 mm (WxDxH)	
Mass	187kg	
Power supply	200 to 240V single-phase/three-phase	

Note 1: Sewing speed may be limited by the type of sewing material, presser weight, stitch length, etc. Note 2: Max. patterns may be limited depending on the number of stitches per pattern in the memory. Note 3: Ethernet is a trademark of Fuji Xerox Co., Ltd.

PLK-Y4040R/6040R

#### Sewing area 400 x 400mm: PLK-J4040/4040R/4040R3 600 x 400mm: PLK-J6040/6040R/6040R3

Item	PLK-J4040/	PLK-J4040R/	PLK-J4040R3/
<u>````````````````````````````````</u>	PLK-J6040	PLK-J6040R	PLK-J6040R3
Stitching style		ngle-needle lockstit	
Hook	Double-size shuttle hook	Double-size	Triple-size
Needle	Shuttle nook	rotary hook DP×17 #18	rotary hook
Needle	Intermittent feed:	DPX17 #18	
	2.000rpm	Intermittent fe	ed: 2,300rpm
Max. speed (Note 1)	Continuous feed:	Continuous feed: 2,500rpm	
	2,000rpm		,
Feeding system	Intermittent o	r continuous (switch	over method)
Stitch length	0.1 to 20.	0mm (min. resolutio	n 0.1mm)
Max. stitches	2	0,000 stitches/patte	rn
Max. patterns	9,000 <sup>(Note 2)</sup>		
Memory medium	USB flash memory		
Upper shaft motor	Mitsubishi Electric 750W direct servo motor		
Lower shaft motor	Mitsubishi Electric 400W direct servo motor		
Work holder	Chucking system		
Presser foot drive	Direct drive by stepping motor		
Presser foot lift stroke	18.0mm (max. 24.0mm) variable in 0.1mm step		
Presser foot stroke	Digital adjustment stroke: 0.0 to 10.0mm		
	Manual/digital switchover method		
Upper thread tensioner	Input data save function provided		
	Stitching direction-compatible automatic adjustment function provided		
Oil lubrication	Spray method: Spray time adjustment		
Operation panel	6.5-inch color LCD touch panel with USB port		
External device	Terminal I/O 16-point input, 16-point output		
Interface	Ethernet (Note 3) (CC-Link IE Field Basic compatible), USB communication		
Barcode reader	USB barcode reader (HID) supported		
Thread break detection,		Standard equipmen	ŧ
skipped stitch detection (Note 4)			
Stitch alert (Note 4)		-	
Programmable controller	Dual original step sequence function		
Outline dimensions	1,350 x 1,570 x 1,205 mm (WxDxH)		
Mass	440kg		
Power supply	200 to 240V single-phase/three-phase		

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Note 3: Ethernet is a trademark of Fuji Xerox Co., Ltd. Note 4: Detection of all stitch errors is not guaranteed. Always complete adjustments according to the stitching conditions before use.

Next-generation Sewing



## Sewing area 1,000 x 500mm: PLK-J10050/10050R/10050R3

Model Item	PLK-J10050	PLK-J10050R	PLK-J10050R3
Stitching style	Single-needle lockstitch		
Hook	Double-size shuttle hook	Double-size rotary hook	Triple-size rotary hook
Needle		DP×17 #21	
Max. speed <sup>(Note 1)</sup>	Intermittent feed: 2,000rpm Continuous feed: 2,000rpm	Intermittent feed: 2,500rpm Continuous feed: 2,500rpm	
Feeding system	Intermittent o	r continuous (switch	over method)
Stitch length	0.1 to 20.	0mm (min. resolutio	n 0.1mm)
Max. stitches	2	0,000 stitches/patte	rn
Max. patterns		9,000 (Note 2)	
Memory medium	USB flash memory		
Upper shaft motor	Mitsubishi Electric 750W direct servo motor		
Lower shaft motor	Mitsubishi Electric 400W direct servo motor		
Work holder	Chucking system		
Presser foot drive	Direct drive by stepping motor		
Presser foot lift stroke	18.0mm (max. 24.0mm) variable in 0.1mm step		
Presser foot stroke	Digital adjustment stroke: 0.0 to 10.0mm		
	Manual/digital switchover method		
Upper thread tensioner	Input d	ata save function pr	ovided
	Stitching direction-compatible automatic adjustment function provided		
Oil lubrication	Spray method: Spray time adjustment		
Operation panel	6.5-inch color LCD touch panel with USB port		
External device	Terminal I/O 16-point input, 16-point output		
Interface	Ethernet (Note 3) (CC-Link IE Field Basic compatible), USB communication		
Barcode reader	USB barcode reader (HID) supported		
Thread break detection, skipped stitch detection (Note 4)	Standard equipment		
Stitch alert (Note 4)	-		
Programmable controller	Dual original step sequence function		
Outline dimensions	2,122 x 1,941 x 1,205 mm (WxDxH)		
Mass		620kg	
Power supply	200 to 240V single-phase/three-phase		

Note 1: Sewing speed may be limited by the type of sewing material, presser weight, stitch length, etc. Note 2: Max. patterns may be limited depending on the number of stitches per pattern in the memory. Note 3: Ethernet is a trademark of Fuji Xerox Co., Ltd. Note 4: Detection of all stitch errors is not guaranteed. Always complete adjustments according to the stitching conditions before use.

PLK-712060 🐏

PLK-712060R 🖻

PLK-**7**12060R3 🞯

#### Sewing area 1,200 x 600mm: PLK-J12060/12060R/12060R3

Item Model	PLK-J12060	PLK-J12060R	PLK-J12060R3
Stitching style	Single-needle lockstitch		
Hook	Double-size shuttle hook	Double-size rotary hook	Triple-size rotary hook
Needle	DPx17 #21		
Max. speed (Note 1)	Intermittent feed: 2,000rpm Continuous feed: 2,000rpm	Intermittent feed: 2,300rpm	
Feeding system	Intermittent o	r continuous (switch	over method)
Stitch length	0.1 to 20.	0mm (min. resolutio	n 0.1mm)
Max. stitches	20	0,000 stitches/patte	rn
Max. patterns		9,000 (Note 2)	
Memory medium	USB flash memory		
Upper shaft motor	Mitsubishi Electric 750W direct servo motor		servo motor
Lower shaft motor	Mitsubishi Electric 400W direct servo motor		
Work holder	Chucking system		
Presser foot drive	Direct drive by stepping motor		
Presser foot lift stroke	18.0mm (max. 24.0mm) variable in 0.1mm step		
Presser foot stroke	Digital adjustment stroke: 0.0 to 10.0mm		
	Manua	l/digital switchover r	nethod
Upper thread tensioner	Input d	ata save function pr	ovided
	Stitching direction-compatible automatic a function provided		natic adjustment
Oil lubrication	Spray method: Spray time adjustment		
Operation panel	6.5-inch color LCD touch panel with USB port		
External device	Terminal I/O 16-point input, 16-point output		
Interface	Ethernet (Note 3) (CC-Link IE Field Basic compatible), USB communication		
Barcode reader	USB barcode reader (HID) supported		
Thread break detection, skipped stitch detection (Note 4)	Standard equipment		
Stitch alert (Note 4)	-		
Programmable controller	Dual oriç	ginal step sequence	function
Outline dimensions	2,522 x	2,112 x 1,205 mm (\	WxDxH)
Mass		650kg	
Power supply	200 to 240V single-phase/three-phase		



## Sewing area 400 x 400mm: PLK-J4040RH

Item Model	PLK-J4040RH
Stitching style	Single-needle lockstitch
Hook	6-fold rotary hook
Needle	DD×1 #26
Max. speed (Note 1)	Intermittent feed 1,000rpm Continuous feed 1,000rpm (Note 1)
Feeding system	Intermittent or continuous (switchover method)
Stitch length	0.1 to 20.0mm (min. resolution 0.1mm)
Max. stitches	20,000 stitches/pattern
Max. patterns	9,000 <sup>(Note 2)</sup>
Memory medium	USB flash memory
Upper shaft motor	Mitsubishi Electric 750W direct servo motor
Lower shaft motor	Mitsubishi Electric 400W direct servo motor
Work holder	Chucking system
Presser foot drive	Direct drive by stepping motor
Presser foot lift stroke	15.0mm (max. 30.0mm) variable in 0.1mm step
Presser foot stroke	Digital adjustment stroke: max. 10mm
	Manual/digital switchover method
Upper thread tensioner	Input data save function provided
	Stitching direction-compatible automatic adjustment function provided
Oil lubrication	Spray method: Spray time adjustment
Operation panel	6.5-inch color LCD touch panel with USB port
External device	Terminal I/O 16-point input, 16-point output
Interface	Ethernet (Note 3) (CC-Link IE Field Basic compatible), USB communication
Barcode reader	USB barcode reader (HID) supported
Thread break detection, skipped stitch detection (Note 4)	-
Stitch alert (Note 4)	Standard equipment
Programmable controller	Dual original step sequence function
Outline dimensions	1,350 x 1,570 x 1,250 mm (WxDxH)
Mass	460kg
Power supply	200 to 240V single-phase/three-phase

## PLK-710050RH 🞯

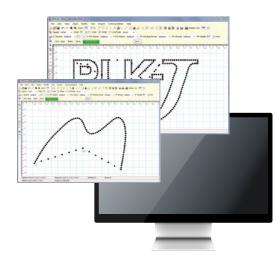


## Sewing area 1,000 x 500mm: PLK-J10050RH

Item	PLK-J10050RH	
Stitching style	Single-needle lockstitch	
Hook	6-fold rotary hook	
Needle	DD×1 #26	
Max. speed (Note 1)	Intermittent feed 1,000rpm Continuous feed 1,000rpm <sup>(Note 1)</sup>	
Feeding system	Intermittent or continuous (switchover method)	
Stitch length	0.1 to 20.0mm (min. resolution 0.1mm)	
Max. stitches	20,000 stitches/pattern	
Max. patterns	9,000 <sup>(Note 2)</sup>	
Memory medium	USB flash memory	
Upper shaft motor	Mitsubishi Electric 750W direct servo motor	
Lower shaft motor	Mitsubishi Electric 400W direct servo motor	
Work holder	Chucking system	
Presser foot drive	Direct drive by stepping motor	
Presser foot lift stroke	15.0mm (max. 30.0mm) variable in 0.1mm step	
Presser foot stroke	Digital adjustment stroke: max. 10mm	
	Manual/digital switchover method	
Upper thread tensioner	Input data save function provided	
	Stitching direction-compatible automatic adjustment function provided	
Oil lubrication	Spray method: Spray time adjustment	
Operation panel	6.5-inch color LCD touch panel with USB port	
External device	Terminal I/O 16-point input, 16-point output	
Interface	Ethernet <sup>(Note 3)</sup> (CC-Link IE Field Basic compatible), USB communication	
Barcode reader	USB barcode reader (HID) supported	
Thread break detection, skipped stitch detection (Note 4)	-	
Stitch alert (Note 4)	Standard equipment	
Programmable controller	Dual original step sequence function	
Outline dimensions	2,122 x 1,941 x 1,250 mm (WxDxH)	
Mass	640kg	
Power supply	200 to 240V single-phase/three-phase	

Note 1: Sewing speed may be limited by the type of sewing material, presser weight, stich length, etc. Note 2: Max. patterns may be limited depending on the number of stitches per pattern in the memory. Note 3: Ethernet is a trademark of Fuji Xerox Co., Ltd. Note 4: Detection of all stitch errors is not guaranteed. Always complete adjustments according to the stitching conditions before use.

### **PTN-JX**



Model Item	PTN-JX
Recommended op	eration environment
CPU	1.5GHz or higher 32bit (x86) or 64bit (x64) processor
OS	Windows <sup>®</sup> 8/8.1 (32bit/64bit)/Windows <sup>®</sup> 10 (32bit/64bit)
RAM	32bit: 1GB or more, 64bit: 2GB or more
HDD	Windows <sup>®</sup> 8/8.1, Windows <sup>®</sup> 10 : 32bit (16GB or more open space), Windows <sup>®</sup> 8/8.1, Windows <sup>®</sup> 10 : 64bit (20GB or more open space)
Monitor resolution	Capable of displaying 1024x768 or higher
Monitor color setting	Full color (32bit) or higher
	CD-ROM drive (used for installation),
Peripheral devices	USB memory (medium for electronic sewing machine and pattern data), USB port x 2 (for USB memory or USB communication, for protection key), RS-232C port (when exchanging stitching data between PTN-GX and sewing machine)

\*1. The CPU, memory, and hard disk specifications may vary depending on the amount of data being processed.
\*2. A relatively high PC performance is required for the best use.

Windows is a trademark or registered trademark of Microsoft Corporation in the United States and other countries.

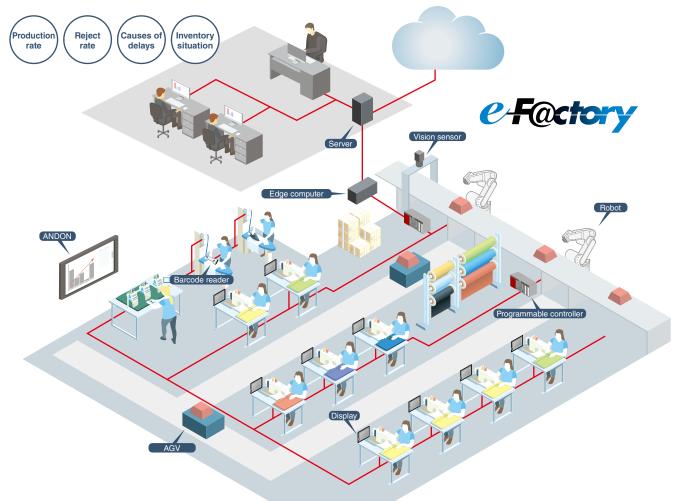
Main specification	S
Protector type	USB
Input type	Linear, arc, circle, curve, polygonal line, point, multiple/offset, zigzag, tacking (same input functions as Mitsubishi Electric's PLK-J Series electronic sewing machines)
Modification type	Delete, insert, change, move, convert, code (in addition to Mitsubishi Electric's PLK-J Series electronic sewing machine modification function, data can be deleted, inserted and moved in block units)
Display scale	20 to 5000%
Grid line pitch	0.1 to 100mm, or hidden
Input method	Personal computer mouse, coordinate value input (absolute coordinate, relative coordinate)
Supported data types	Data compatible with Mitsubishi Electric's PLK electronic sewing machines (J, G data)*1 DXF data* <sup>2</sup> (R12, R13, R14), embroidery data (only specified versions are supported)

\*1. G data is read only.
\*2. Some restrictions apply to the data conversion function. Please refer to the instruction manual before use.



# Linking to the next-generation factory with e-F@ctory

The FA comprehensive solution "e-F@ctory" uses FA technology and IT technology to reduce total costs required for general development, production, and maintenance. It continuously supports our customers' improvement activities, and proposes solutions designed for leading production.



#### **Reducing energy costs**

#### Energy-saving solutions

Today, as factories are faced with a need to reduce energy consumption, Mitsubishi Electric's energy saving technology "visualizes" all of the energy, enabling factories to reduce consumption and improve productivity.

## Reducing costs from development to production and maintenance

#### iQ Platform

"iQ Platform" integrates and links controllers and HMIs that control production systems, the engineering environment, and the network to realize cost reductions in all phases from customer design, startup, operation, to maintenance.



#### Reducing integration costs with FA-IT

#### Edge computing (FA-IT information sharing)

By linking FA-IT with edge computing, production site data can be easily collected and analyzed, and used to support overall optimization, including productivity improvement and quality improvement. In addition, IoT can be easily realized in FA systems.

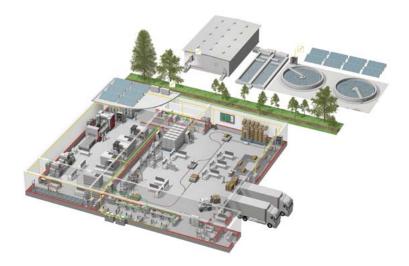
## Reducing sensor settings and maintenance costs

#### iQ Sensor Solution

Setting and maintenance of various sensors used in the production line are accomplished with one tool. MELSENSOR and iQSScompatible partner sensors can be set and controlled collectively, and system design, startup, and maintenance costs can be reduced.



## **YOUR SOLUTION PARTNER**



Mitsubishi Electric offers a wide range of automation equipment from PLCs and HMIs to CNC and EDM machines.

#### **A NAME TO TRUST**

Since its beginnings in 1870, some 45 companies use the Mitsubishi name, covering a spectrum of finance,commerce and industry.

The Mitsubishi brand name is recognized around the world as a symbol of premium quality.

Mitsubishi Electric Corporation is active in space development, transportation, semi-conductors, energy systems, communications and information processing, audio visual equipment and home electronics, building and energy management and automation systems, and has 237 factories and laboratories worldwide in over 121 countries. This is why you can rely on Mitsubishi Electric automation solution - because we know first hand about the need for reliable, efficient, easy-to-use automation and control in our own factories.

As one of the world's leading companies with a global turnover of over 4 trillion Yen (over \$40 billion), employing over 100,000 people, Mitsubishi Electric has the resource and the commitment to deliver the ultimate in service and support as well as the best products.





Medium voltage: VCB, VCC



Power monitoring, energy management



Compact and Modular Controllers



Inverters, Servos and Motors



Visualisation: HMIs



Numerical Control (NC)



Robots: SCARA, Articulated arm



Processing machines: EDM, Lasers, IDS



Transformers, Air conditioning, Photovoltaic systems



To ensure safe and proper use of the products in this document, please make sure to read the relevant instruction manuals and technical notes before use.

Note: Be sure to confirm the details of the warranty when making a purchase.

#### MITSUBISHI ELECTRIC CORPORATION

FACTORY AUTOMATION SYSTEMS Tokyo Building, 2-7-3 Marunouchi, Chiyoda-ku, Tokyo 100-8310, JAPAN http://www.mtco-web.co.jp/english/sewing\_machine/index.html