

# A new generation comes of age

The J-Series takes industrial sewing to the next level

The new 'E-Stitch' function prevents the skipping of stitches at the beginning of sewing thus avoiding wasted materials. Skipped stitch and thread breakage detection are standard features of the J-Series. Their low vibration and quiet operation contributes to a 25% reduction in energy consumption compared to previous generation sewing machines. The computer built into each J-Series sewing machine can be connected to a factory-wide control system using CC-Link or another Industrial Ethernet protocol to create a Smart Factory or Industry 4.0 manufacturing environment to improve overall productivity and synchronise output with actual market demand.

As such the J-Series is suitable for a wide range of duties in the most demanding of textile sectors, including sewing for automotive and aviation applications, shoe uppers, the production of denim garments for fashion and workwear, tent, awning and shelter manufacture as well as the production of sun blinds.

Designed for the most demanding of textile sectors, where failure is not at option.

## Technical specifications

Specifications	PLK-J6040	PLK-J6040R	PLK-J2516YU	PLK-J2516RYU	PLK-J4040RH
<b>Stitching style</b>	Single-needle lockstitch		Single-needle lockstitch		Single-needle lockstitch
<b>Hook</b>	Shuttle (Large)	Double-size rotary hook	Shuttle hook (Large)	Double-size rotary hook	Triple-size rotary hook
<b>Needle</b>	DP×17 #18		DP×17 #18		DDx1 #26
<b>Sewing area (X x Y)</b>	600mm x 400mm		300mm x 200mm		400mm x 400mm
<b>Max. speed <sup>1</sup></b>	Intermittent: 2,000rpm Continuous: 2,000rpm	Intermittent: 2,300rpm Continuous: 2,500rpm	Intermittent: 2,300rpm Continuous: 2,300rpm		Intermittent: 1000rpm Continuous: 1000rpm
<b>Feeding system</b>	Intermittent or Continuous (switchover method)		Intermittent or Continuous (switchover method)		Intermittent or Continuous (switchover method)
<b>Stitch length</b>	0.1 to 20.0mm (min. resolution 0.1mm)		0.1-20.0mm (min. resolution 0.1mm)		0.1-20.0mm (min. resolution 0.1mm)
<b>Max. stitches</b>	20,000/pattern		20,000/pattern		20,000/pattern
<b>Max. patterns</b>	9,000 <sup>2</sup>		9,000 <sup>2</sup>		9,000 <sup>2</sup>
<b>Memory medium</b>	USB flash memory		USB flash memory		USB flash memory
<b>Upper shaft motor</b>	Mitsubishi Electric 750W direct servo motor		Mitsubishi Electric 750W direct servo motor		Mitsubishi Electric 750W direct servo motor
<b>Lower shaft motor</b>	Mitsubishi Electric 400W direct servo motor		Mitsubishi Electric 750W direct servo motor		Mitsubishi Electric 400W direct servo motor
<b>Work holder</b>	Jig eject system		Air clamp 30mm stroke max.		Jig eject system
<b>Presser foot drive</b>	Direct drive by stepping motor		Direct drive by stepping motor		Direct drive by stepping motor
<b>Presser foot lift stroke</b>	18.0mm (max. 24.0mm) variable in 0.1mm step		18.0mm (max. 24.0mm) variable in 0.1mm step		18.0mm (max. 24.0mm) variable in 0.1mm step
<b>Presser foot stroke</b>	Digital adjustment stroke: 0.0 to 10.0mm		Digital adjustment stroke: 0.0 to 10.0mm		Digital adjustment stroke: 0.0 to 10.0mm
<b>Upper thread tensioner</b>	Manual/Automatic/Setting on pattern (switchover)		Manual/Automatic/Setting on pattern (switchover)		Manual/Automatic/Setting on pattern (switchover)
<b>Thread cuttable yarn count</b>	#30 - #1	#30 - #5	#30 - #1	#30 - #5	#30 - #1
<b>Oil lubrication</b>	Spray method: Spray time adjustment		Spray method: Spray time adjustment		Spray method: Spray time adjustment
<b>Operation panel</b>	6.5-inch color LCD touch panel with USB port		6.5-inch color LCD touch panel with USB port		6.5-inch color LCD touch panel with USB port
<b>External device</b>	Terminal I/O: 27input(+2 analog.), 27output(+2 analog.)		Terminal I/O: 27input(+2 analog.), 27output(+2 analog.)		Terminal I/O: 27input(+2 analog.), 27output(+2 analog.)
<b>Interface</b>	Ethernet <sup>3</sup> (Support CC-Link IE Field Basic), USB port		Ethernet <sup>3</sup> (Support CC-Link IE Field Basic), USB port		Ethernet <sup>3</sup> (Support CC-Link IE Field Basic), USB port
<b>Barcode reader</b>	Support USB barcode reader (HID)		Support USB barcode reader (HID)		Support USB barcode reader (HID)
<b>Programmable controller</b>	Original step sequence function		Original step sequence function		Original step sequence function
<b>Outline dimensions</b>	1,350 x 1,570 x 1,205mm (WxDxH)		1,200 x 1,068 x 1,230 mm (W x D x H)		1,350 x 1,570 x 1,205mm (WxDxH)
<b>Mass</b>	440kg		187kg		450kg
<b>Power supply</b>	200 to 240V single-phase/three-phase 380 to 415V (optional unit required)		200 to 240V single-phase/three-phase 380 to 415V (optional unit required)		200 to 240V single-phase/three-phase 380 to 415V (optional unit required)

1: Sewing speed may be limited by the type of sewing material, presser weight and stitch length, etc.

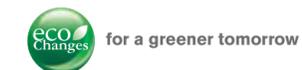
2: The maximum patterns may be limited depending on the number of stitches of each pattern in the memory.

3: Ethernet is a trademark of Fuji Xerox Co., Ltd.

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# PLK J-Series

Next generation industrial sewing technology



- State of the art automatic industrial sewing machines
- Latest innovations to improve production and standout from competitors
- Mitsubishi Electric – your global partner for local service and long-term partnerships

## Cutting edge developments take industrial sewing to next level



## Fast, accurate – the PLK J-Series offers exceptional quality



The textile industry is in constant pursuit of increased productivity, improved efficiency and reduced costs. Yet for some sectors within the industry, quality can never be compromised.

For automotive trim and airbags; luxury goods, designer handbags and leather suitcases; climbing harnesses, cargo webbing and safety belts every stitch must be absolutely perfect.

Mitsubishi Electric's innovative new J-Series of industrial sewing machines offers quick, simple set up and easy operation. They combine high throughput with superbly accurate, while digital tension monitoring means the thread is under complete control at all times so that each stitch from first to last is perfectly sewn and every seam is faultless.

Digital tension control as standard. Suitable digital thread tension adjustment is automatically controlled by stitch direction.



### PLK-J4040RH Strong, fast, controlled

Super-high quality stitching and preservation of the full integrity of the textile is essential in the manufacture of safety equipment such as climbing harnesses, load restraining straps, webbing and netting. Mitsubishi Electric has developed special lockstitch and programmable sewing solutions to meet the quality requirements for protection and safety equipment manufacture.

With the new PLK-J4040RH sewing machines thread tension control can be individually set for each new job and can also be adjusted on the fly as the direction of sewing changes. It is even possible to have several different thread tension values programmed into the control computer and selected to ensure maximum strength at all points.

PLK-J4040RH machines can sew up to 20mm stitches at up to 1000rpm, enabling the fast and efficient manufacture of safety products even with the high density of stitching required.

### PLK-J2516YU Versatile, intelligent, adjustable

When it comes to luxury leather goods the quality of the threadwork has to be perfect. In the past this could only be achieved by hand sewing every seam, but now Mitsubishi Electric has coupled its long experience in the leather industry with the expertise of its design engineers. The result is the development of the PLK-J2516YU, a new generation of sewing machine technology adapted to leather that combines all the most appropriate components and technologies in a flexible and adaptable configuration.

Because leather varies in thickness, the drive system of the PLK-J2516YU is designed so that the rise height of the needle and the time the needle is in contact with the leather are finely adjustable. It is also able to detect the presence or absence of materials and start or stop sewing accordingly, thus avoiding untidy stitching at the beginning and end of seams.

### PLK-J6040R Powerful, reliable, precise

The PLK-J6040R industrial sewing machine is designed specifically for the production of hard-wearing, high performance products such as air bags, any type of vehicle trim and other heavy-duty applications.

Controlled from an integral full colour computer screen, set-up of each new job is fast and simple. With many jobs being repeats of previous work, all operational settings can be recalled from the computer memory in seconds. A new automatic adaptive speed control, enables constant adjustment, depending on sewing pattern angles, to maintain stitch quality and instant response to changes in material and thickness, while the digital control ensures constant stitch tension along the entire length of each seam.

The hook and bar are lubricated by a computer controlled pneumatic spray to ensure smooth operation, while the simple mechanical design enables easy forward/backward adjustment.