



**Panasonic's all-rounder pick-and-place machine that handles both SMT and THT components as standard or odd-form components in one placement order.**

## **NPM-VF**

The NPM-VF is equipped with a double portal. The SMD and THT components are placed by one placement head per portal. A wide variety of vacuum pipettes and grippers are available. The pick and place machine can be used in single or dual lane mode. The NPM-VF reaches a speed of up to 4,500cph and can process component sizes from 5x5mm up to 130x35mm and 60mm height. Active cutting and clinching tools are integrated which detach THT components from the radial and axial feeders. Clinching directions as well as pin lengths per THT component can be defined via the assembly program. Beside the radial and axial feeders, the NPM-VF can be equipped with all common standard feeder systems for SMD components. The flexible NPM-VF is an ideal machine for cycle-optimized production, especially for companies that must process both types of components due to the increased demand from power electronics for THT assemblies. This efficient pick and place machine contributes to reduce manpower requirements and to consistent production with high productivity, flexibility and high-quality pick and place results.

### **Key Features**

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Double portal

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Active cutting and clinching tools

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High-quality pick and place results.

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Compatible with common standard feeder systems for SMD components

## NPM-VF

<https://ap.connect.panasonic.com/th/en/products/smart-factory/npm-vf>

<b>Model Number</b>	NPM-VF
<b>PCB dimensions (mm)</b>	Standard conveyor:L 50 x W 50 ~ L 510 x W 460 Anvil conveyor (Option): L 50 x W 50 ~ L 460 x W 400
<b>Max. PCB Mass</b>	Up to 3kg
<b>PCB Thickness</b>	0.3 ~ 8 mm
<b>PCB Flow</b>	Left ← Right / Left → Right (Flow direction is selectable)
<b>Insertion direction</b>	360° (± 180°)*1 degree unit
<b>Insertion Push Force</b>	Up to 100 N
<b>PCB exchange</b>	Standard conveyor:4.5 s Anvil conveyor (Option):5.5 s
<b>Clinch Specifications</b>	Anvil conveyor (Option): Clinch angle : 60 degrees outward clinch Clinch pitch : 2.5 to 40 mm Lead bend angle : 10 ~ 40° Lead diameter : φ 0.4 mm ~ φ 1.0 mm (soft copper) φ 0.4 mm ~ φ 0.8 mm (hard copper / CP wire)
<b>Applicable components</b>	Max. dimensions : L 130 mm × W 35 mm × H 60 mm  L 150 mm × W 38 mm × H 29 mm  Max. component mass : 200g
<b>Electric Source</b>	3-phase AC 200, 220, 380, 400, 420, 480 V, 2.7 kVA
<b>Pneumatic Source</b>	0.5 ~ 0.8 MPa, 200 L /min (A.N.R.)
<b>Dimensions (mm)</b>	W 1 866 x D 2 332 x H 1 554 (Main body only)  W 2 166 x D 2 332 x H 1 554 (When downstream extension conveyor is connected)
<b>Mass</b>	Note: Excluding the monitor, signal tower and ceiling fan cover. 2 590 kg (Only for main body : This differs depending on the option configuration)
<b>3-station head</b>	Body chuck + Nozzle + Nozzle  Body chuck + Nozzle + Swing nozzle  Body chuck + Nozzle + Lead chuck  Body chuck + Swing nozzle + Lead chuck
<b>2-station head</b>	Tact : Max. 0.65 s / component Body chuck + Body chuck  Tact : Max. 0.9 s / component
<b>Stick</b>	S  Max. component dimension : W 20 x L 80 x H 20 mm Max. stick width : 24 mm Max. component mass : 2 kg in total (including stick mass)  L Max. component dimension : W 60 x L 80 x H 45 mm Max. stick width : 64 mm Max. component mass : 2 kg in total (including stick mass)
<b>Radial Tape</b>	Max. body dimension : Max. φ 20 x H 30 mm  Lead pitch : 2.5 / 5.0 / 7.5 / 10.0 mm
<b>Tray</b>	Max. tray dimension : L 230 x W 335 x D 69 mm
<b>Bulk</b>	Max. pallets per feeder : Max. mass : 20 kg (magazine + pallet + tray + components) Customized spec
<b>Machine Configuration Front</b>	Max. number of products to be loaded: Stick S  30-slot fixed supply unit: 15
<b>Machine Configuration Rear</b>	30-slot fixed supply unit: 15  13-slot fixed supply unit + single tray feeder: 6  Twin tray feeder: - Single tray feeder + Bowl feeder x 2: - Bowl feeder x 4: -

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**Software**

NPM-DGS · AM-LNB · LNB、 Option : PanaCIM、 iLNB

Note:Max. 3 NPM-VF can be connected to AM-LNB

Up to 15 machines of the NPM series (including NPM-VF) or the SP series can be connected to LNB.

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**Optional Features**

Component verification, Traceability, Automatic changeover, Host communication, iLNB line control including other company's machine

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**SMT Components**

Applicable components:

Min. dimensions: L 5 mm × W 5 mm or larger (For tape, embossed tape of 12 mm or larger)

Placement specs: Head: Nozzle only Placement accuracy: QFP  $\pm 0.05$  mm (Cpk  $\geq 1$ )

Max. tact time: 3000 cph (per head)

Supply unit (embossed tape)

Tape feeder width 12/16 mm 24/32 mm

30-slot supply unit 30 15

13-slot supply unit 13 6