# Constituent of Smart Factory

## Much more than just data

**Of course, the acquisition and analysis of production data is the main focus of our Smart Factory approach, because measures must be derived from this with which the entire production system and its individual processes can be designed more effectively. Our pick and place machines are a constituent of this concept. Options for further optimisation of your processes are also derived from your production data.**

The networking of manufacturing systems opens up new possibilities for analysing and controlling manufacturing. This does not only apply to SMT machines, but also to THT placement with the NPM-VF, which is based on the NPM series machine platform. Plant-wide traceability of every product and every process, as well as material inventory management can be seamlessly implemented in a single unit with the Process Enforcement and PanaCIM Gen2 MC/MA software modules, both in the automated process and also in the subsequent process of manual THT assembly if necessary, regardless of the production assortment and the volume.




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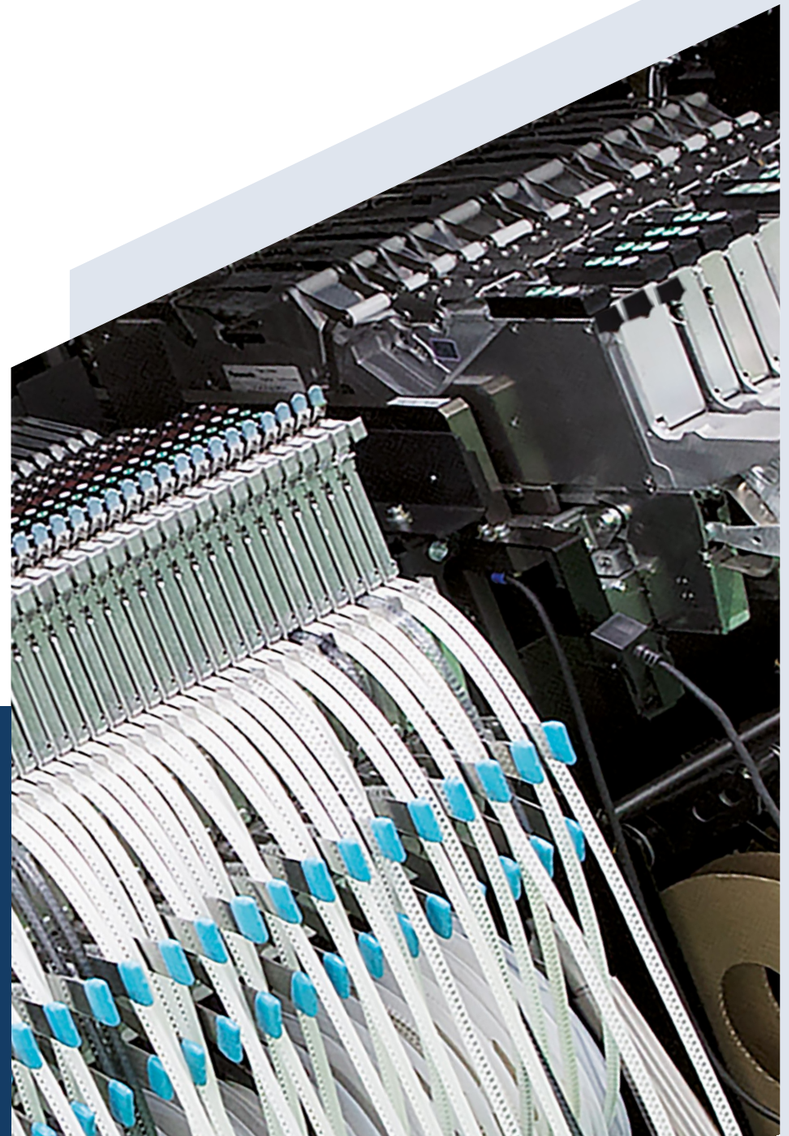

**Panasonic**
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# Pick and place machine for THT and special components

## NPM-VF | AV 132
## RL 132 | RG 131

For your efficiency
of today and tomorrow

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# Efficient precision placement for THT components, special designs and SMT components on one machine

With the NPM-VF, Panasonic has created a platform which makes economical automation in power electronics possible.

**The technology of the NPM-VF is based on the successful NPM series, and therefore achieves a level of quality in terms of robustness, placement quality and flexibility which has never been achieved before in the industry.**

With the NPM-VF, a machine has been created which can be configured in accordance with customer requirements. The two portals working in parallel, each with up to three placement heads, provide maximum placement performance with simultaneous flexibility. Systems for large batch production: In addition to the very flexible NPM-VF, Panasonic can also provide very fast placement machines for radial and axial components: AV132, RL132, RG131 and RG131S. These placement machines specialise in one type of component, and are particularly useful for products which are manufactured in large quantities. A combination with the NPM-VF has the advantage of combining speed with flexibility.

# Machine highlights

## Placement capacity

High, **reliable placement capacity**, which is achieved by two placement portals working in parallel, achieved with up to three heads in each case.

## Cut and clinch tools

The active cut and clinch lower tool cuts the legs to an **exact length** when they during bending.

## Tool changes

Too changing stations for grippers, pipettes and adapters **increase the flexibility and yield** during manufacture.

## Range of components

**Exceptionally wide range of components** from small LEDs to varistors and electrolytic capacitors to large transformers. Also used as an SMT assembler for fine-pitch components or pin-in-paste components.

## Component detection

The camera system makes **transmissive and reflective component and pin detection** possible, and allows the pin tips to be detected without loss of time for the lowest possible error rates.

## Component infeed

**Radial and axial belts, sticks, palettes, blister tapes and embossing tapes and bulk material/ vibratory spiral conveyors** can be used as component feeders.

## Other machine options

**Feeder carts and tray supply unit**
For fast product changes and a high degree of flexibility

**Body chuck vacuum gripper pipettes**
With programmable placement force (up to 100 N), flexible gripping force and minimum component clearances

**Advanced program generation**
Cross-machine and cross-line programming software with optimisation, monitoring and automation functions

# Panasonic pick and place machine for THT and special components

## Technical data comparison

| | NPM-VF | AV132 | RL132 | RG131/RG131S |
|---|---|---|---|---|
| **Placement capacity (theoretical)** | 0.65 s – 0.9 s per component Depending on the head configuration | 0.12 s per component | 0.14 s per component | 0.25 s per component |
| **Number of feeder stations (depending on the configuration of the machine)** | up to 30 (stick and radial feeder) up to 60 (blister tapes) 20 or 40 palettes (tray supply unit) | 2 versions: - 40 tape infeeds - 40+ 40 tape infeeds Additional jumper/wire bridge station | 2 versions: - 40 tape infeeds - 80 tape infeeds | 2 versions: - 40 tape infeeds - 80 tape infeeds |
| **Range of components** | 5 x 5 to 125 x 50 mm max. 60 mm high incl. component legs; maximum placement/setting force 100 N | Taped axial components with placement grid 5 mm to 26 mm; variable adjustment during operation | Taped radial components in matrix 2.5/5.0/7.5/10 mm max. 13 mm component diameter; Hn = max. 23 mm | Taped radial components in matrix 2.5/5.0/7.5/10 mm max. 18 mm component diameter; Hn = max. 26 mm |
| **PCB format** | 50 x 50 mm to 510 x 460 mm (460 x 400 m with Cut & Clinch) | 50 x 50 mm to 508 x 381 mm | 50 x 50 mm to 508 x 381 mm | 50 x 50 mm to 508 x 381 mm |
| **Placement heads** | 50 x 50 mm to 510 x 460 mm (460 x 400 m with Cut & Clinch) | Variable placement matrix; 4 placement direction in steps of 90° | Lead chuck system Placement direction 0° – 360° | Guide pin system 4 placement directions in 90° steps; practically no clearance required |
| **Machine size (L x D)** | max. 2,166 mm x 2,332 mm 1,544 mm high | 40 stations: 2,104 mm x 2,300 mm 40+ 40 stations: 3,106 mm x 2,300 mm 1,575 mm high | 40 stations: 2,104 mm x 2,183 mm 80 stations: 3,200 mm × 2,417 mm 1,575 mm high | 40 stations: 2,104 mm × 2,183 mm 80 stations: 3,200 mm × 2,417 mm 1,620 mm high |
| **PCB transport systems** | Single-lane belt transport "Pusher system" (with Cut & Clinch) | Single-lane system | Single-lane system | Single-lane system |

*Disclaimer: Right reserved to make changes; the respective current Panasonic machine specification applies.*