Nidec OKK Corporation

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**Nidec OKK to Launch Multi-level Pallet Stocker that Meets Automation and Labor-saving Needs, and Unveil It with Five-axis Vertical Machining Center VB-X350 at AMB 2024 in Germany**

Nidec OKK Corporation ("Nidec OKK" or the "Company") has today announced that it will launch a multi-level pallet stocker that boasts a best-in-class space efficiency, and that is installed in five-axis vertical machining center VB-X350. To meet the automation and labor-saving needs in the limited-lot production of a wide variety of products such as EVs, semiconductor equipment, and electronic components, the Company is ready to offer an automation system that combines a high-speed five-axis processing machine with a multi-level pallet stocker capable of replacing processed materials (work pieces) automatically.

Nidec OKK will unveil this system at AMB2024, an international exhibition for metal working to be held in Germany's Stuttgart from September 10 – 14, as a product to contribute to improving the productivity of increasingly complex component machining.

**Automation system equipped with 5-axis vertical machining center VB-X350 (left) and a multi-level pallet stocker**


**VB-X350** **Multi-level pallet stocker**

This latest multi-level pallet stocker, which automatically moves work-attached pallets into and out of a machine, was developed based on a **"space-efficient, easy operations"** concept so that the system can be installed regardless of the user's production style or place.

To save space, the pallet stocker adopts a stereoscopic (vertical stacking) system and a minimum layout for the automatic pallet changing device's drive. In addition, the system boasts a minimum pallet rack combination unit of 16 pallets (4 lines x 4 columns) and a maximum pallet rack combination of 28 pallets (7 lines x 4 columns). Furthermore, the system uses compact components and mechanical units to allow sufficient space, achieving a top-level space efficiency in the class.

To make it easy to use even for inexperienced operators, the system employs a control board with a simple, intuition-oriented screen. Additionally, to ease the operator's burden during machine setup, the operator can use an operation program to perform a variety of tasks ranging from entering and viewing work manuals, knowhow, etc. to managing work-changing timing and machining schedule. With these combinations of the machines and the stereoscopic pallet stocker, and hardware and software, this new system enables night-time autonomous driving, reduces labor man-hours to lessen the operator's burden, and improves productivity.

Nidec OKK stays committed to developing and offering a wide variety of machines and peripheral equipment to address automation, labor-saving, and many other issues faced by manufacturing sites.

■ **The multi-level pallet stocker's specifications**

| Model name (unit) | VB-X350 |
|---|---|
| Pallet size (mm) | 280 x 280 |
| Pallet mass (kg) | 20 |
| Maximum work mass kg) | 100 |
| Maximum work size mm) | φ450 x 305 |
| Pallet stocker | |
| Pallet rack (min.) (line x rack) | 16 (4 x 4) |
| Pallet rack (max.) (line x rack) | 28 (7 x 4) |
| Machine setup station | 1 |
| Machine setup surface | 4 (manual dividing every 90°) |
| Floor size (incl. this product) Standard specification (mm) | 3,880 x 3,940 |

*Comparison where a machining center with a pallet size of 300 x 300mm combined with a multi-level pallet stocker (for 16 pallets)

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