Press release

Rotary loading system (RLS) enhanced

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**New variants and optimized functions for flexible manufacturing**

**Liebherr-Verzahntechnik GmbH have revised and further developed their rotary loading system (RLS) for automated and order-specific machine loading. Offering an additional load category for transportation weights up to 2,000 kilograms, greater storage density and wider interference diameters, the automation specialist is able to meet current manufacturing requirements. The new version will be presented at EMO 2025 in Hanover (Germany).**

The RLS consists of a round storage shelf, lift module, setup station and optional storage tower. It operates as a transportation and storage system upstream of the workpiece machining process and guides workpieces into the machining process automatically. It can automate up to two machining centers, can be flexibly configured and offers a high storage density with minimal footprint. This makes it highly economically suitable for automated manufacturing.

**Modular design for customizable configuration**

The RLS system architecture is based on a modular platform. All of the platform’s basic modules can be individually configured for the required load category so the RLS can be precisely tailored to the appropriate production environment. The lift module loads components fully automatically into the storage shelf, which is available with two to four levels. The manufacturer-independent design also enables the system to connect to a wide range of machining centers.

**New variant for large workpieces**

What is new is an additional size capable of carrying a transportation load of up to 2,000 kilograms, adding an additional weight category to the 800 and 1,500 kilogram variants already available. This now enables larger and heavier workpieces to be efficiently integrated into the automated manufacturing process. The maximum interference diameters have also been expanded from 900 to 1,400 millimeters so the system can be optimally adjusted to the workpiece spectrum.

**Optimized setup station**

The ergonomic, modular designed setup station has been completely revised. It offers options with manual or electrical rotary units and clamping hydraulics can be integrated, presenting the new opportunity to position workpieces right on the setup station using a precision bearing. This was previously only possible on freely positionable setup stations, but the function is now available on enclosed setup stations as well.

**Response to changing customer requirements**

The reason for this enhancement is the growing demand from customers whose machines now machine larger and heavier workpieces with higher dimensions. This demand did not require a new design, but involved maximizing the advantages to the customer by optimizing use of space and higher transportation weights: “This revision was a logical step because automation should not limit the machines, but broaden their spectrum of applications,” explains Markus Zollitsch, Project Leader for RLS development. The aim is to reduce production costs and be able to respond to market fluctuations quickly while simultaneously ensuring maximum ease of operation, process reliability and quality.

**“Design to Value” development approach**

The “Design to Value” development approach defines the revision process. The target was harmonize the main customer demands with greater cost efficiency. “We wanted to strike the optimal balance between performance, quality and profitability,” says Knut Jendrok, Head of Sales for Flexible Manufacturing Systems. The RLS remains manufacturer independent and, as before, can be combined with diverse machining centers.

Photos

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